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PUBLICATIONS

OF THE

FIELD COLUMBIAN MUSEUM

BOTANICAL SERIES

VOLUME I.

CHICAGO, U. S. A.
1895–1902.*

*For date of issue of each paper see Table of Contents.

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(Betula Nigra L.)

5-7-96

FIELD COLUMBIAN MUSEUM

PUBLICATION 9.

Botanical Series. Vol. 1, No. 2.

FLORA

OF

WEST VIRGINIA

BY

CHARLES FREDERICK MILLSPAUGH,
Curator, Department of Botany,

AND

LAWRENCE WILLIAM NUTTALL

COMPLIMENTS OF

FREDERICK J. V. SKIFF
Director

CHICAGO, U. S. A.

January, 1896.

PUBLICATIONS OF THE MUSEUM.

For the convenience of scientific workers it has been deemed expedient to issue the publications of the Museum in separate series for each of the sciences represented. The following series thus far have been established: Historical, Geological, Botanical, Zoölogical, Ornithological and Anthropological.

A consecutive number has been given the entire set of publications to indicate the order of issue. Each departmental series, however, has its own volume number and individual consecutive pagination, making the literature of the science, or general subject, independent and complete for separate binding; or they may be bound in order of publication without relation to subject. Proceedings, memoirs, monographs, bulletins, and hand-books and catalogues of collections, are included within the scope of the publications.

Full lists of the publications of the Museum may be found in the Annual Report of the Director.

Publications are sent to societies and institutions of a public character that reciprocate with their own literature and to a limited number of scientists who are able to exchange.

Two publications have been issued of the Botanical series: Contribution to the Flora of Yucatan (Pub. 4); and The Flora of West Virginia (Pub. 9). Contribution II to the Flora of Yucatan is in preparation.

FREDERICK J. V. SKIFF,
Director.

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Sassafras, *Sassafras Sassafras*. Trunk 22 in., finished board "wavy" 18 in.

Silver Bell, *Mohrodendron Carolinum*. Trunk 8 in.

Sourwood, *Oxydendron arboreum*. Trunk 15 in.

Spruce (black) *Picea Mariana*. Trunks 31, 34, and 49 in., planks 8 and 40 in., finished boards 18 and 20 in.

Spicewood, *Benzoin Benzoin*. Trunk 2 in.

Sumach, *Rhus typhina*. Trunk 8 in.

Service, *Amalanchier Canadensis*. Trunks 8 and 9 in.

Thorn, *Crategus coccinea*. Trunk 10 in.

Tree of Heaven, *Ailanthus glandulosus*. Trunks 8 in., 24 in., 38 in.

Witch Hazel, *Hamamelis Virginica*. Trunks 4 and 5 in.

Walnut (black) *Juglans nigra*. Trunks 30 and 36 in., plank 29 in. finished boards "wavy" 20 in., "figured" 21 in.

Willow (black), *Salix nigra*. Trunk 12 in.

SUMMARY OF THE FLORA.

	Genera	Species.
Fungi, etc.,	342	980
Lichens,	31	115
Thallophyta, etc.,	373	1095
Hepaticæ,	24	32
Musci	42	90
Sphagnæ,	1	1
Bryophyta,	67	123

	Genera	Species.
Equisitæ,	1	4
Filicinæ,	14	40
Ophioglossæ,	2	7
Lycopodæ,	1	5
Selaginellæ,	1	1
Pteridophyta,	19	57
Gymnospermæ,	7	13
Monocotyledons,	95	268
Dicotyledons,	412	1028
Anthophyta,	514	1309

Total number of species, varieties and forms detected in the State to the date of this Flora, - - - - - - - - 2584

CATALOGUE.*

Fungi.

PHALLACEÆ.

ITHYPHALLUS Fries.

I. impudicus (Linn.) Fr.

In the juvenile, egg stage, June 15, 1893, Oct. 28, 1893, we find the veil under pileus about one-third its length and part of it encircling the stipe about the middle (*Nuttall*, 983).

NIDULARIACEÆ.

CRUCIBULUM Tul.

C. vulgare Tul.

On sticks and leaves, open woods, and on old cotton cloth, July 6, 1893 (*Nuttall*, 1079).

LYCOPERDACEÆ.

TYLOSTOMA Pers.

T. mammosum (Mich.) Fr.

On light soil on rock, March 24, 1893 (*Nuttall*, 880).

MITREMYCES Nees.

M. lutescens Schn.

On wet mossy banks, alt. 2,000 ft., March 25, 1893 (*Nuttall*, 881).

GEASTER Mich.

G. mammosus Chev.

On earth, Short Creek, July 6, 1893 (*Nuttall*, 1080).

BOVISTA Dill.

B. lepidophora (E. & E.) De Ton.

In grass on lawn, Sept. 5, 1893. Clavate 8 cm. high, 12 cm. broad, sterile base 3.5 cm. thick, white cuticle 1.5 mm. thick, gleba pale yellow (*Nuttall* 1193).

B. PILA Berk. & Curt.

Free on open ground. Monongalia Co., near Morgantown (*Millspaugh*).

*Unless otherwise stated, all my numbers in this Flora are from Fayette Co., near Nuttallburg.—*L. W. Nuttall.*

LYCOPERDON Tourn.

L. gemmatum Batsch.

On ground in woods, alt. 2,000 ft., Aug. 24, 1893 (*Nuttall*, 1180).

L. furfuraceum Schæff.

In grass on lawn, Sept. 3, 1893. Capillitium thicker than the spores, branches few, 2.5 to 4 cm. in diameter, outer coat pure white (*Nuttall*, 1188).

L. pedicellatum Peck.

On moss on ground in pine woods, alt. 2,000 ft., March 10, 1893. Pedicels 20 μ long (*Nuttall*, 864).

L. PYRIFORME Schæff.

Under bark of *Quercus palustris*, Monongalia Co., near Morgantown and near Little Falls (*Millspaugh*) on rotten wood, Feb. 2, 1893 (*Nuttall*, 832).

SCLERODERMA Pers.

S. VULGARE Hornem.

On chips of *Picea Mariana*, Tucker Co. Falls of Blackwater (*Millspaugh*). Grant Co., on dead logs, Otter Fork of Cheat; and Monongalia Co., Tibbs Run, plentiful on clay of a path (*Millspaugh*). In laurel thickets, July 28, 1893. Spores 10 μ. (*Nuttall*, 1125).

S. Bovista Fr.

On ground, March 21, 1893 (*Nuttall*, 876).

BOVISTELLA Morg.

B. Ohioense (Ell. & Morg.) Morg.

In grass on lawn, June 26, 1893 (*Nuttall*, 1003).

MUCORACEÆ.

MUCOR Mich.

M. MUCEDO Linn.

On open canned fruit left standing (*Millspaugh*). On dead dry fruit *Asimina triloba*, Oct. 1, 1895 (*Nuttall*, 1866, 754).

SPORODINIA Link.

S. Aspergillus (Scop.) Schroet.

On dead *Agaricus* and *Boletus*, Sept. 10, 1893 (*Nuttall*, 1196).

PERONOSPORACEÆ.

CYSTOPUS Lev.

C. CANDIDUS (Pers.) Lev.

On living leaves of *Dentaria diphylla*, Monongalia Co., at Little Falls (*Millspaugh*). On *Brassica nigra*, July 8, 1893 (*Nuttall*, 1082).

C. Portulacæ (DC) Lev.
On *Portulacca oleracea*, July 8, 1893 (*Nuttall*, 1083).

C. Bliti (Biv.) DeB.
On *Amaranthus retroflexus*, July 20, 1893. Spores 18 to 22 x 15 to 18 μ (*Nuttall*, 1615).

PLASMOPARA Schroet.

P. VITICOLA (B. & C.) Berl. & De Ton.
On fruit of *Vitis Labrusca*, Monongalia Co., near Morgantown (*Millspaugh*).

PHYTOPHTHORA DeBary.

P. INFESTANS (Mont.) DeB.
On living leaves and tubers *Solanum tuberosum*, Monongalia Co., near Morgantown (*Millspaugh*).

BREMIA Regel.

B. Lactucæ Regel.
On *Lactucca Canadensis* and *L. hirsuta*, June 14, 1894 (*Nuttall*, 1549).

PERONOSPORA Corda.

P. OBOVATA Bon.
On living leaves *Spergula arvensis*, Preston Co., near Terra Alta (*Millspaugh*).

ENTOMOPHTHORACEÆ Nowak.

EMPUSA Cohn.

E. MUSCÆ (Fr.) Cohn.
On *Musca domestica*, Monongalia Co., at Morgantown (*Millspaugh*). Very prevalent on a species of *Tachina* found on maple leaves in great numbers in 1892 at Morgantown (*Millspaugh*).

E. GRYLLI Fr.
On tufted caterpillars, on grasshoppers, and on the house fly, Monongalia Co., at Morgantown (*Millspaugh*).

SCHIZOMYCETACEÆ.

BACCILLUS Cohn.

B. TUBERCULOSIS Koch.
In sputa of consumptive (*Millspaugh*).

B. ACIDI-LACTICI (Zopf) Schroet.
In soured milk (*Millspaugh*).

B. SUBTILIS (Ehrenb.) Cohn.
In infusion of hay and on exposed boiled potato (*Millspaugh*).

B. ULNA Cohn.
On exposed coagulated egg albumen (*Millspaugh*).

SPIRILLUM Ehrenb.

S. UNDULA (Muell) Ehrenb.
In infusion of hay (*Millspaugh*).

BACTERIUM Ehrenb.

B. LINEOLA (O. F. Muell) Cohn.
In infusion of radish (*Millspaugh*).

B. TERMO (O. F. Muell.) Ehrenb.
In various decomposing organic substances (*Millspaugh*).

MICROCOCCUS (Hall.) Cohn.

M. CREPUSCULUM (Ehrenb.) Cohn.
Found associated with *Bacterium Termo* in decomposing vegetable infusions (*Millspaugh*).

M. AMYLOVORUS Burrill.
On fruit of *Pyrus communis*, Monongalia Co., near Morgantown (*Millspaugh*).

M. AURANTIACUS, Cohn.
Caught on sterilized potato in laboratory (*Millspaugh*).

M. LUTEUS Cohn.
Caught on sterilized potato in laboratory (*Millspaugh*).

STREPTOCOCCUS Billr.

S. PYOGENES (Rosenb.) Zopf.
Micrococcus septicus, Cohn. In blood of dead calf (*Millspaugh*).

S. UREÆ (Cohn.) Trev.
Micrococcus ureæ, Cohn. In decomposing urine (*Millspaugh*).

SACCHAROMYCETACEÆ.

SACCHAROMYCES Meyen.

S. CEREVISIÆ Meyen.
In Pasteur's liquid left uncorked in laboratory (*Millspaugh*).

S. MYCODERMA Reess.
On same liquid as above at same date (*Millspaugh*).

DIATOMACEÆ.

CYMBELLA GASTROIDES, Kuetz.
CYMBELLA TURGIDA (Grun.) Greg.
STAURONEIS PHŒNICENTRON Ehrb.
NAVICULA VIRIDIS, Kuetz.
NAVICULA MAJOR, Kuetz.
NAVICULA NOBILIS (Ehrb.) Kuetz.

NAVICULA RHOMBOIDES, Ehrb.
NAVICULA BOREALIS (Ehrb.) Kuetz.
NAVICULA TRINODIS, Lewis.
ACHNANTHES LANCEOLATA, Breb.
SYNEDRA ULNA (Nitzsch.) Ehrb.
NITZSCHIA AMPHIOXYS INTERMEDIA, Grun.

MYXOMYCETEÆ.

PHYSARUM Pers.

P. citrinum Schum.
On moss, alt. 2,000 feet, Aug. 2, 1893, (*Nuttall*, 1160).

P. pulcherrimum B. & R.
On dead wood, July 25, 1893 (*Nuttall*, 1133).

P. psittacinum Ditm.
On fruit cones of *Magnolia Fraseri*, alt. 2,000 ft., Aug. 12, 1893 (*Nuttall*, 1165).

P. sinuosum (Bull.) Rost.
On bark of *Aralia spinosa*, Aug. 16, 1893 (*Nuttall*, 1154).

LEOCARPUS Link.

L. fragilis (Dicks.)
On *Aspidium spinulosum* and twigs of *Tsuga Canadensis*, Nov. 25, 1895 (*Nuttall*, 1888).

TILMADOCHE Fr.

T. nutans (Pers.) Rost.
On dead *Asparagus* leaves, and dead limbs *Magnolia Fraseri*, Nov. 4, 1893 (*Nuttall*, 1264).

T. gyrocephala (Mont.) Rost.
On dry bark of *Hicoria ovata*, living leaves of *Hydrangea*, etc., Short Creek, alt. 1,300 ft., Aug. 21, 1893 (*Nuttall*, 1168).

T. viridis (Gmel.) ?
On dead limbs *Magnolia Fraseri*, Sept., 1895 (*Nuttall*, 1856, 744?)

DIDYMIUM Schrad.

D. squamulosum (Alb. & Schw.) Fr.
On new timber in mine near the entrance, Sept., 1893 (*Nuttall*, 1342).

DIACHÆA Fries.

D. leucopoda (Bull.) Rost.
On dead wood and leaves in damp, shady place, June 23, 1893 (*Nuttall*, 998).

LAMPRODERMA Rost.

L. violaceum (Fr.) Rost.
On very rotten wet log, Short Creek, alt. 1,300 ft., Oct. 25, 1893 (*Nuttall*, 1255).

COMATRICHA P. Hoyer.

C. Friesiana (DeB.) Rost.
On rotten log, Nov. 6, 1893 (*Nuttall*, 1237).

STREMONITIS Gled.

S. fusca Roth.
On rotten log, and on *Hydnum* sp., April 7, 1893 (*Nuttall*, 889).

S. ferruginea Ehrh.
On log, Keeney's Creek, June 9, 1893 (*Nuttall*, 973).

TUBULINA Pers.

T. cylindrica (Bull.) DeC.
On dead log. Spores brown, rough (reticulate?) approx. 6 μ diameter, Oct. 20, 1893 (*Nuttall*, 1230).

LINDBLADIA Fries.

L. effusa (Ehr.) Rost.
Forms large patches on dead *Tsuga Canadensis* at Short Creek Cliff and Masterson's Glade, July 15, 1893 (*Nuttall*, 1130).

CRIBRARIA Pers.

C. aurantiaca Schrad.
On dead wet log, July 25, 1895 (*Nuttall*, 1826, 712).

RETICULARIA Bull.

R. Lycoperdon Bull.
On dead log, Short Creek, April 6, 1893 (*Nuttall*, 888).

ARCYRIA Hall.

A. punicea Pers.
On rotten stump, June 15, 1893 (*Nuttall*, 979).

A. cinera (Bull.) Schum.
On damp dead wood and weeds in shade, July 24, 1893 (*Nuttall*, 1118).

A. nutans (Bull.) Grev.
On dead log, Short Creek. Spores 7.5μ, July 24, 1893 (*Nuttall*, 1119).

LYCOGALA Mich.

L. epidendron Buxb.
On wet dead logs, June 15, 1893 (*Nuttall*, 995). On *Magnolia Fraseri*, Nov. 1895.

TRICHIA Hall.

T. fallax Pers.
On side of dead log, Oct. 19, 1893. Rich reddish-brown color when fresh, shining pale-brown when dry; elaters long and slender pointed, spores 10 to 12.5 μ (*Nuttall*, 1209).

T. CHRYSOSPERMA (Bull.) DeC.
On decayed wood, Monongalia Co., near Morgantown (*Millspaugh*). On dead logs, Feb. 8, 1893 (*Nuttall*, 842).

T. proximella Karst.
On *Liquidambar styraciflua*, Feb. 6, 1893 (*Nuttall*, 836).

HEMIARCYRIA Rost.

H. RUBIFORMIS (Pers.) Rost.
Under bark of *Fraxinus Americana* and *Quercus alba*, Monongalia Co., near Morgantown (*Millspaugh*). On bark of dead *Quercus* sp. Feb. 13, 1893 (*Nuttall*, 843).

H. CLAVATA (Pers.) Rost.
Under bark of wet decaying log *Quercus alba*. Monongalia Co., near Morgantown (*Millspaugh*). On dead log, June 15, 1893 (*Nuttall*, 831).

H. stipata Schw.
On dead wet limbs of *Magnolia Fraseri*, Sept. 16, 1895 (*Nuttall*, 1847).

HYPHOMYCETACEÆ.

OOSPORA Wallr.

O. fasciculata (Berk.) Sacc.
On decaying orange, Jan. 15, 1893 (*Nuttall*, 1134).

MONILIA Pers.

M. aureo-fulva C. & E.
On under side dead log *Liquidambar styraciflua*, Aug. 29, 1893 (*Nuttall*, 1186).

M. FRUCTIGENA Pers.
On ripe fruit *Prunus cerasus* cult. Monongalia Co., near Morgantown (*Millspaugh*). On fruit of *Prunus domestica* cult. and *Amygdalus Persica* cult., June 28, 1893 (*Nuttall*, 1006).

POLYSCYTALUM Riess.

P. sericeum Sacc.
On *Quercus Prinus*, Nov., 1893 (*Nuttall*, 1335, 293).

OIDIUM Link.

O. erysiphoides Fr.
On *Zizia cordata*, *Eupatorium purpureum* and *Rubus odoratus*, Nov. 18, 1893 (*Nuttall*, 1266, 210).

O. LEUCOCONIUM Desm.
On leaves of *Rosa* cult., Cabell Co., near Huntington (*Millspaugh*).

O. MONILIOIDES Link.
On living leaves *Poa pratensis*, Preston Co., near Terra Alta (*Millspaugh*). On same host, May 30, 1894 (*Nuttall*, 1512).

BOTRYOSPORIUM Corda.

B. pulchrum Corda.

On *Lactuca Canadensis*, Aug. 23, 1895. Tips of branches inflated. Spores 7.5 x 2.5 μ (*Nuttall*, 1844, 735).

TRICHODERMA Pers.

T. lignorum (Tode) Harz.

Under bark rotten *Hicoria ovata* Short Creek, alt. 1,250 ft., Dec. 8, 1893 (*Nuttall*, 1299, 248).

ASPERGILLUS Mich.

A. glaucus (Linn.) Link.

On *Crategus* sp., April 30, 1894 (*Nuttall*, 1474).

A. glaucus oblongisporus E. & E. n. var?

Found on *Lachnocladium semivestitum* after neglect in plant press (*Nuttall*, 1871, 760).

This is either a new species or a distinct variety of A. glaucus. The smooth oblong-elliptical conidia are quite different from the usual form. Spores 5 to 7.5 x 2.5 to 3 μ.

A. flavus Lk.

Also found on *Lachnoladium semivestitum* neglected in plant press (*Nuttall*, 1877, 760).

Conidia 4 to 6 μ diameter.

STERIGMATOCYSTIS Cram.

S. nigra v. Tiegh.

On dried peach in garden, Aug. 15, 1893 (*Nuttall*, 1170).

PENCILLIUM Link.

P. glaucum Link.

On *Hydnum* sp. and *Polyporus varians*, Aug. 16, 1893 (*Nuttall*, 1164, 136).

BOTRYTIS Mich.

B. olivacea E. & E. sp. nov.

TYPE HABITAT: On dead log. Short Creek, alt. 1,800 ft., Feb. 26, 1894 (*Nuttall*, discov. 1411, 381). Fungi Columbiana, 593. N. A. F., 3187.

Forming thin olivaceous patches 2 to 4 cm. in extent, composed of olive-brown, septate threads, about 4 μ thick, and dichotomously or oppositely branched above, the short (15 to 25 μ) branches sub-attenuated above, and bearing the obovate or elliptical, olive-brown, 6 to 8 x 4 to 4.5 μ conidia at their tips.

B. torta E. & E., Proc. Phila. Acad., 1894, 375.

TYPE HABITAT: On dead leaves *Carex Fraseri*, Dec. 10, 1893 (*Nuttall*, discov. 1248, 257).

Hyphæ simple, sparingly branched, twisted above as in *B. streptothrix* or in *Streptothrix atra* B. & C., brown, 80 to 100 x 3 to 4 μ, forming numerous small brownish-black tufts, effused or gregarious, on both sides of the leaf. Conidia elliptical brown, 5 to 6.5 x 3 to 3.5 μ.

Differs from *B. streptothrix* (C. & E.) in its much smaller conidia and more dwarfish growth.

B. vulgaris Fr.

On leaves *Magnolia Fraseri*, alt. 2,000 ft., July 12, 1893; on burrs of *Xanthium Canadense*, Nov. 1, 1893; on pedicels of *Ipomæa pandurata*, Feb. 17, 1894; on decaying *Brassica oleracea*, Jan. 18, 1894; on *Cicuta maculata*, March 18, 1894 (*Nuttall*, 1116).

HYPHODERMA Fr.

H. DESMAZIERI Duby.

On living leaves *Pinus echinata*. Wood Co., near Lockhart's Run (*Millspaugh*).

VERTICILLIUM Nees.

V. osteophilum E. & E., sp. nov.

TYPE HABITAT: On jaw bone of calf, in woods, Nov. 27, 1894 (*Nuttall*, discov. 1761, 647.)

Prostrate sterile hyphæ yellowish-brown, distantly septate, rough, 6 to 7 μ diameter; fertile hyphæ, loosely cespitose, erect septate, smooth, yellowish-hyaline, 7 to 15 μ diameter, the primary branches alternate, and issuing at right angles, bearing opposite or ternately-verticillate branches, the ulmate division 12 to 15 x 4 μ 3 to 4 in a terminal verticil, with tips often curved and bearing 1 to 4 terminal, globose, hyaline, 3.5 to 4 μ; conidia.

V. puniceum (Cke. & E.) Grev.

On dead sticks, June, 1893 (*Nuttall*, 1115).

TRICHOTHECIUM Link.

T. roseum (Pers.) Link.

On dead dried peach on ground; on decaying leaves *Ilex verticillata*, Sept. 14, 1893 (*Nuttall*, 1199).

CEPHALOTHECIUM Corda.

C. **roseum** Corda.

On old *Polyporus pergamenus*, Short Creek, alt. 1,300 ft., Nov. 10, 1893 (*Nuttall*, 1260, 205).

DACTYLIUM Nees.

D. **dendroides** (Bull.) Fr.

On *Polystictus versicolor*, and apparently checking its development. Oct. 12, 1893 (*Nuttall*, 1206). Spores 28 x 10 μ.

RAMULARIA Ung.

R. Celastri Ell. & Mart.
On leaves of *Celastrus scandens* near the ground. Oct. 11, 1894. Conidia 15 to 28 μ (*Nuttall*, 1700).

R. Tulasnei Sacc.
On *Fragaria* cult., Oct. 27, 1894 (*Nuttall*, 1724).

R. Taraxaci Karst.
On *Taraxacum Taraxacum*, Oct. 20, 1894 (*Nuttall*, 1722).

DEMATIACEÆ.

CONIOSPORIUM Link.

C. harknessioides (Ell. & Holl.) Sacc.
On *Rumex acetosella*, Oct. 20, 1894 (*Nuttall*, 1727, 613).

TORULA Pers.

T. dimidiata Penz.
On *Rhus hirta*, alt. 1,300 ft., Nov. 21, 1893 (*Nuttall*, 1273, 220).

T. herbarum Link.
On *Asparagus officinalis*, Nov. 1, 1893 (*Nuttall*, 1240, 186).

PERICONIA Bon.

P. pycnospora Fres.
On *Parthenocissus quinquefolia*, Feb. 20, 1894. Conidia 12.5 to 15 μ diameter. On *Rubus odoratus*. On *Polymnia Uvedalia*. On *Phytolacca decandra*, hyphæ 600 x 15 to 16 μ (*Nuttall*, 1413). On *Polymnia Uvedalia*, spores 12.5 to 15 μ Nov. 16, 1894 (*Nuttall*, 1743).

GONATOBOTRYUM Sacc.

G. maculiocolum (Wint.) Sacc.
On young sprouts *Hamamelis Virginica* 1 to 2 feet high; Short Creek, alt. 1,850 ft., Aug. 15, 1894 (*Nuttall*, 1656).

STREPTOTHRIX Corda.

S. atra B. & C.
On dead limbs on ground. Conidia 6 to 8 x 4.5 to 5 μ, Dec. 16, 1893 (*Nuttall*, 1329).

ZYGODESMUS Corda.

Z. graminicola E. & E.
On *Carex Fraseri*, spores 7.5 μ Feb. 11, 1894 (*Nuttall*, 1374, 334).

Z. pannosus B. & C.
On charred bark, May 28, 1894 (*Nuttall*, 1531, 502).

STACHYLIDIUM Link.

S. caricinum E. & E., Proc. Phila. Acad., 1894, 377.

TYPE HABITAT: On dead leaves *Carex Fraseri* Feb. 11, 1894 (*Nuttall*, discov. 1375, 335).

Hyphæ fasciculate brown, septate 600 to 700 x 3 μ simple or occasionally forked above towards the tip, with short cylindrical hyaline branches opposite or in whorls of three, bearing at their tips the elliptical, hyaline 4 to 5 x 1.5 to 2 μ conidia, collected into a globose head 10 to 12 μ diameter.

FUSICLADIUM Bonord.

F. DENDRITICUM (Waller.) Fckl.

On living *Pyrus Malus* leaves and fruit. Monongalia Co., near Morgantown (*Millspaugh*).

F. Virginiense E. & E. sp. nov?

TYPE HABITAT: On living leaves *Aster infirmus*, June 29, 1894 (*Nuttall*, discov. 1593, 541).

POLYTHRINCIUM Kunze & Schm.

P. Trifolii Kunze.

On *Trifolium repens*, July 4, 1894 (*Nuttall*, 1588).

CLADOSPORIUM Link.

C. herbarum (Pers.) Link.

On *Polygonatum biflorum*, *Menispermum Canadense*, and leaves of *Rhus hirta*, June 28, 1894 (*Nuttall*, 1564).

C. herbarum fasciculare Corda.

On *Reseda* cult., Jan. 28, 1894. Conidia 15 to 18 x 6 to 7.5 μ 1 to 2 septate (*Nuttall*, 1354).

C. nigrellum E. & E., Proc. Phila. Acad., 1893, 463.

TYPE HABITAT: On inner bark of *Robinia Pseudacacia* railroad ties, Keeney's Creek, Oct. 1893 (*Nuttall*, discov. 1227, 172).

Hyphæ densely tufted, septate, subequal, 150 to 200 x 5 to 6 μ, tufts effused, subconfluent, forming a black, velvety coat extending over the surface of the bark indefinitely, with the same habit as *Macrosporium nigrellum* C. & E. Conidia smoky-hyaline, becoming pale brown, variable in size, the smaller ones ovate, continuous or uniseptate, 6 to 8 x 5 μ, the larger ones oblong-elliptical or sub-cylindrical, 2 to 3-septate, 12 to 15 x 5 to 6 μ.

C. Triostei Peck.

On living leaves *Triosteum perfoliatum*, alt. 1,200 ft., July 26, 1894 (*Nuttall*, 1824).

C. epiphyllum (Pers.) Mart.

On dying leaves *Robinia Pseudacacia*, July 31, 1893 (*Nuttall*, 1139).

C. ———— sp.

On dead decorticated limb *Magnolia Fraseri*, Sept., 1895 (*Nuttall*, 1853, 739).

A most beautiful velvety black form.

C. epimyces Cooke.

On pileus *Polyporus varians*, Jan. 25, 1894 (*Nuttall*, 1341).

CLASTEROSPORIUM Sz.

C. Cornutum E. & E., sp. nov.

TYPE HABITAT: On decaying wood, Oct. 21, 1895 (*Nuttall*, discov. 1883).

Hyphæ prostrate, septate, branched, brown, about 6 μ diameter. effused in black velvety patches 1 to 2 cm. across. Conidia in pairs or threes, horn-shaped, 10 to 14 septate, 100 to 225 x 14 μ, broadest below, gradually tapering above to an obtuse point, curving outward at the base, rising and spreading out above like the horns of an ox. The conidia are but slightly constricted at the septa and are sessile on the hyphæ, appearing at first as a simple nodule or tubercle on the side of the thread.

Allied to *C. Hirudo* Sacc., but that has solitary multiseptate (55 to 65) conidia and evanescent hyphæ.

HELMINTHOSPORIUM Link.

H. persistens Cooke.

On branches of *Acer* in pine woods, alt. 2,000 ft., March 9, 1894. Conidia 75 to 150 x 10 to 15 μ (*Nuttall*, 1421, 392).

H. macrocarpon Grev.

On decorticated limbs *Platanus occidentalis*. Oct. 6, 1895 (*Nuttall*, 1887). On *Magnolia Fraseri*, Nov. 1895.

H. folliculatum Corda.

On *Zea Mays*, Aug. 2, 1895 (*Nuttall*, 1835).

H. attenuatum Peck & Cooke.

On dead log, Short Creek, alt. 1,800 ft., June 10, 1894 (*Nuttall*, 1547).

H. septemseptatum Peck.

On *Magnolia Fraseri*, June 20, 1894 (*Nuttall*, 1574, 534).

H. brachypus E. & E. sp. nov.

TYPE HABITAT: On dry wood of old log. Oct. 8, 1895 (*Nuttall*, discov. 1873, 757).

Effused in brownish-black patches of several centimeters in extent, velutinous, thin. Prostrate hyphæ only sparingly branched, obscurely septate, crooked; fertile hyphæ cespitose, erect, 40 to 50 x 4 to 6 μ, 2 to 3 septate, abruptly constricted at the tips and subtruncate. Conidia terminal, oblong-fusoid, 5-septate

brown, not constricted at the septa, 30 to 40 x 12 to 14 μ, with a short (8 to 10 μ) obconical, hyaline or pale-brown, persistent pedicel, which is sometimes prolonged into a hyaline thread as long as the spore. This prolongation may be something of the nature of a pith or medulla drawn out of the supporting hypha and remaining attached to the pedicel.

CERCOSPORA Fres.

C. Armoraciæ Sacc.
On *Roripa Armoracia*. Conidia 175 x 5 μ, Aug. 26, 1894 (*Nuttall*, 1687, 593).

C. CAULOPHYLLI Peck.
On living leaves *Caulophyllum thalictroides*, Grant Co., near Bayard (*Millspaugh*).

C. Violæ Sacc.
On *Viola obliqua*, Aug. 10, 1895 (*Nuttall*, 1841, 731).

C. granuliformis Ell. & Hol.
On living leaves *Viola obliqua*, June 28, 1894 (*Nuttall*, 1565).

C. oculata E. & K.
On leaves *Vernonia Noveboracensis*, Aug. 6, 1894 (*Nuttall*, 1682).

C. Vernoniæ E. & K.
On leaves *Vernonia Noveboracensis*, Oct. 10, 1894 (*Nuttali*, 1698).

C. omphacodes Ell. & Hol.
On *Phlox amœna*, July 14, 1894 (*Nuttall*, 1605).

C. Dirantherae E. & K.
On leaves of *Dianthera Americana*. Oct. 23, 1895 (*Nuttall*, 1879).

C. avicularis Wint.
On living leaves *Polygonum aviculare*, July 5, 1895 (*Nuttall*, 1815).

C. dubia (Riess) Wint.
On *Chenopodium album viride*, July 4, 1894 (*Nuttall*, 1587).

C. beticola Sacc.
On leaves *Beta vulgaris*, Oct. 4, 1894 (*Nuttall*, 1692).

C. Bœhmeriæ Peck.
On leaves *Bœhmeria cylindrica*, Oct. 5, 1894 (*Nuttall*, 1694).

C. Acalyphæ Peck.
On leaves *Acalypha Virginica*, Oct. 3, 1894 (*Nuttall*, 1691).

C. Ampelopsidis Peck.
On *Parthenocissus quinquefolia*. Conidia + 40 x 3 μ, June 30, 1894 (*Nuttall*, 1578).

C. Menispermi E. & H.

On leaves *Menispermum Canadense.* Conidia + 77 x 5 μ June 26, 1894 (*Nuttall*, 1562).

C. ageratoides E & E.

On *Eupatorium ageratoides*, Oct. 14, 1894 (*Nuttall*, 1706).

C. anthelmintica Atk.

On living leaves *Chenopodium anthelminticum*, Oct. 15, 1894 (*Nuttall*, 1713, 601).

C. Kalmiæ E. & E.

On leaves *Kalmia latifolia*, Aug. 15, 1893 (*Nuttall*, 1167).

C. Œnotheræ E. & E., Proc. Phila. Acad., 1894, 380.

TYPE HABITAT: On leaves *Onagra biennis*, Oct. 1894 (*Nuttall*, discov. 1704, 599).

Spots irregular, mostly elongated, grayish-brown, sub-angular, 3 to 5 x 2 to 3 mm. subconfluent. Hyphæ amphigenous, subhyaline, continuous or faintly 1 to 2 septate, 15 to 20 x 3 μ in minute scattered tufts, few in a tuft, spreading subundulate. Conidia linear or only slightly attenuated above, smoky-hyaline, nucleate and faintly 3 to 5 or more septate, 25 to 80 x 2 to 2.5 μ straight or only slightly curved.

C. Chionanthi E. & E., sp. nov.

TYPE HABITAT: On living leaves *Chionanthus Virginica*, Sept. 1895 (*Nuttall*, discov. 1852, 738).

Spots variable in shape, subindefinite, dark brown, grayish above, 2 to 4 mm. diameter. Hyphæ epiphyllous, cespitose, 75 to 150 x 3.5 to 5 μ, brown, septate, and subgeniculate or subundulate above. Conidia fusoid or clavate, becoming brown, 3 to 5-septate, 30 to 60 x 4 to 4.5 μ.

C. septorioides E. & E. sp. nov.

TYPE HABITAT: On leaves *Rubus Canadensis*, Oct. 16, 1894 (*Nuttall*, discov. 1725, 610).

Spots dirty-brown, irregular, subangular, more or less limited by the veinlets, 2 to 3 mm. diameter, definite, but without any differently colored border. Hyphæ epiphyllous, cespitose on a small tubercular base, simple, sub-entire, continuous, brownish, 20 to 25 x 3 μ. Conidia cylindrical, slightly curved, hyaline, nucleate, 35 to 63 x 2 to 2.5 μ.

Differs from *C. Rubi* Sacc. in its narrower conidia without septa, and its shorter hyphæ.

C. Rubi Sacc.

On leaves *Rubus Canadensis*, Nov. 1894 (*Nuttall*, 1785, 676).

C. depazeoides (Desm.) Sacc.

On *Sambucus Canadensis*, July 26, 1894 (*Nuttall*, 1626).

C. SMILACIS Thum.

On living leaves *Smilax rotundifolia*, Monongalia Co., near Camp Eden (*Millspaugh*). On *Smilax rotundifolia* (*Nuttall*, 1573, 533).

C. **smilacina** Sacc.
On leaves *Smilax glauca*, Aug. 26, 1894 (*Nuttall*, 1653, 573).

C. **columnaris** E. & E.
On *Phaseolus vulgaris* cult. Oct. 13, 1895 (*Nuttall*, 1870).

SPORODESMIUM Link.

S. toruloides E. & E.
On dead twigs *Cornus florida*, June 10, 1894 (*Nuttall*, 1548, 514).

S. ———— sp.
TYPE HABITAT: On *Tsuga Canadensis*, Feb. 3, 1894 (*Nuttall*, discov. 331).

S. moriforme Peck.
On *Opulaster opulifolius*, May 12, 1894. Spores 25 to 40 x 25 μ (*Nuttall*. 1503, 483).

S. aurantiacum B. & C.
On a dead stick, Short Creek, July 25, 1893 (*Nuttall*, 1132, 115).

S. concinnum Berk.
On wet dead sticks in association with *Clavaria mucida*, Oct. and Nov., 1893. Conidia 112 to 115 x 30 to 32 μ 65 to 100 x 30 μ (*Nuttall*, 1233).

SPEIRA Corda.

S. minor Sacc.
On *Pinus Virginiana*, Dec. 15, 1894. Conidia 30 x 10 μ (*Nuttall*, 1775, 664).

MACROSPORIUM Fr.

M. commune Rabh.
On dead stems of garden *Asparagus officinalis*, conidia+40x15 μ Nov. 1, 1893 (*Nuttall*, 1222). On petioles of *Aralia spinosa*, conidia 75 x 20 μ (*Nuttall*, 358). On *Rumex obtusifolius*, *Rhus radicans* and *Cicuta maculata*? (*Nuttall*).

M. ———— sp.
TYPE HABITAT: On dead stems *Polymnia Uvedalia*, Nov. 3, 1893 (*Nuttall*, discov. 1736, 623).

M. Abutilonis Speg.
On *Abutilon Abutilon*, July 21, 1895 (*Nuttall*, 1836).

M. ———— sp.
TYPE HABITAT: On decayed fruit *Diospyros Virginiana*, April 25, 1895 (*Nuttall*, discov. 1825, 711).

M. asclepiadeum Cooke?
On *Asclepias Syriaca*, Nov. 3, 1894 (*Nuttall*, 1730).

M. caudatum C. & E.
On dead flowers of *Yucca* cult., Sept. 5, 1894 (*Nuttall*, 1680, 587). On stems of *Phytolacca decandra*, conidia 88 x 20 μ.

M. Saponariæ Peck.
On *Saponaria officinalis*, Oct. 6, 1894 (*Nuttall*, 1695).

M. olivaceum E. & E., Proc. Phila. Acad., 1894, 383.
TYPE HABITAT: Parasitic on *Sphæropsis Asiminæ* on dead limbs of *Asimina triloba*, March, 1894 (*Nuttall*, discov. 1418, 388).
Forms a light olive velutinous coat over the pustules of the *Sphæropsis*. Hyphæ tufted, yellowish brown (under the microscope), septate, erect, nearly straight or subundulate, 80 to 100 x 4 to 5 μ. Conidia obovate or obpiriform, 3 to 5-septate and muriform, brown, 24 to 38 x 15 to 20 μ terminal, sessile. Conidia also occur subcubical or subglobose 15 to 20 μ diameter with 2 septæ crossing each other at right angles.

M. antennæforme B. & C.
On *Celtis occidentalis*, Aug. 11, 1894 (*Nuttall*, 1652). Conidia + 95 x 15 μ.

M. _____ sp.
TYPE HABITAT: On pods of *Datura Stramonium*, Feb. 10, 1894 (*Nuttall*, discov. 1369, 326).

M. TOMATO Cooke?
On ripe fruit *Lycopersicum esculentum* cult. Spores shorter than described. Sept. 9, 1893 (*Nuttall*, 1195). Same host Monongalia Co., at Morgantown, prevalent 1891 (*Millspaugh*).

M. Maydis C. & E.
On leaves *Zea Mays* cult., with conidia smaller than described, Nov. 1893 (*Nuttall*, 1334, 292).

TRICHÆGUM Corda.

T. nodulosum E. & E., Proc. Phila. Acad., 1894, 385.
TYPE HABITAT: On dead leaves *Carex Fraseri*, Feb. 11, 1894 (*Nuttall*, discov. 1373, 333).
Erumpent, tufted, becoming subeffused, black, tufts gregarious, forming subvelutinous patches 2 to 4 mm. across, or when standing singly the hyphæ and conidia forming a compact mass .5 to 1 mm. diameter, and resembling somewhat the sorus of a *Puccinia*. Hyphæ simple sparingly fasciculate, brown, septate, often swollen at the septa, about 4 μ thick and 200 to 300 μ long. Conidia near the base of the hyphæ, at first elliptical, yellowish-hyaline, uniseptate, 8 to 10 x 6 to 7 μ, soon becoming 4 to 6-septate, muriform and opaque, 10 to 25 μ diameter, subglobose, obovate, or elliptical.

SEPTOSPORIUM Corda.

S. EQUISETI PECK, Rep. State Bot. N. Y., 1892, 25.
TYPE HABITAT: Tips of living leaves *Equisetum arvense*, Doddridge Co., near Center Point, and Monongalia Co., on College campus, Morgantown (*Millspaugh*, discov. 1891).
Hypæ forming minute tufts, the fertile very short, bearing

acrogenous spores, the sterile longer, septate, colored; spores elliptical, usually with three transverse septæ and one or two longitudinal ones, colored, .001 in. long, .005 in. broad.

SARCINELLA Sacc.

S. heterospora Sacc.

On *Cercis Canadensis*, Oct. 16, 1894 (*Nuttall*, 1726, 610).

STILBACEÆ.

STILBUM Tode.

S. magnum Peck.

In cracks of bark, Nov. 6, 1893. Spores 2.5 x 1.25 μ (*Nuttall*, 1278, 225).

S. flavipes Peck.

On dead driftwood *Platanus occidentalis*, Dec. 12, 1894 (*Nuttall*, 1767).

S. erythrocephalum Ditm.

On dung of Rabbit, Jan. 18, 1894 (*Nuttall*, 1345, 304).

S. vulgare Tode?

On fallen dead leaves, Short Creek, July 25, 1893 (*Nuttall*, 1137, 120).

PILACRE Fries.

P. gracilipes E. & E., Proc. Phila. Acad., 1894, 386.

TYPE HABITAT: On rotten wood, Short Creek, alt. 1,750 ft., Dec. 16, 1893 (*Nuttall*, discov. 1219, 274).

Scattered, stem slender, white-pruinose, 3 mm. long, .25 to .33 mm. thick. Head hemispherical, olivaceous, about 1 mm. diameter. Fertile hyphæ hyaline, dichotomously branched, 2 to 2.5 μ thick, bearing the conidia laterally. Conidia globose or subglobose, yellow-brown under the microscope, 4 to 5.5 μ diameter.

Smaller and of a more slender growth than *P. Petersii* B. & C.

P. Petersii B. & C.

On *Acer saccharum* and *Ilex opaca*, Feb. 10, 1894 (*Nuttall*, 1371). On *Magnolia Fraseri*, Nov. 1895.

ISARIA Pers.

I. Virginiensis E. & E., Proc. Phila. Acad., 1893, 465.

TYPE HABITAT: On the young stroma of *Hypoxylon rubiginosum?* June 30, 1893 (*Nuttall*, discov. 1109, 95, 102).

Stromata gregarious, simple, slender-clavate, 1.5 to 2 mm. high. Yellowish-white, obtuse and subcapitate at the apex, curved, often decumbent, clothed nearly to the base with spreading, hyaline, dendroid, 1.5 to 2 μ branching hyphæ (sporophores) 40 to 45 x 2.5 μ their tips often toothed and bearing 1 to 4 elliptical or ovate, hyaline 3.5 x 2.5 μ conidia.

Analogous to *I. umbrina* Pers (*Institale acariforme* Fr.), but differs in several respects.

I. clavata Ditm.
On dead sticks on ground, June, 1893 (*Nuttall*, 1110).

CERATIUM A. & S.

C. hydnoides (Jacq.) Alb. & Schw.
On rotten log, June 10, 1893 (*Nuttall*, 976).

SPOROCYBE Fr.

S. Rhois (B. & C.) Sacc.
On *Rhus copallina*, March 24, 1894, spores 7.5 x 2 to 2.5 μ. On *Rhus hirta*, March 28, 1894, spores 10 x 2.5 μ (*Nuttall*, 1430).

S. Azaleæ (Peck) Sacc.
On capsules of *Rhododendron maximum*, Dec. 12, 1893. Conidia varying from globular through elliptical to cylindrical, dark brown, outer coat easily ruptured, 10x10, 8x5, 12x5, 15x7.5 μ (*Nuttall*, 1307).

TUBERCULARIACEÆ.

TUBERCULARIA Tode.

T. VULGARIS Tode.
On twigs, Feb. 23, 1893. On *Robinia Pseudacacia*, Dec. 1, 1893. On *Aralia spinosa*, Dec. 13, 1893. On *Sambucus pubens*. On *Acer Negundo*, April 20, 1894 (*Nuttall*, 942). On limbs of dead *Rhus hirta*, Monongalia Co., near Morgantown, 1891 (*Millspaugh*).

T. hamata E. & E., Proc. Phila. Acad., 1894, 386.
TYPE HABITAT: On dead limbs of *Celtis occidentalis*. Feb. 2, 1894 (*Nuttall*, discov. 1357, 313).
Depressed hemispherical, umbonate, soon becoming black, .5 to 1.5 mm. diameter, Conidia oblong, slightly curved, hyaline, 5 to 8x1.5 to 2 μ on slender simple sporophores 30 to 40 μ long, incurved or involute at the tips.

T. _____ sp.
On *Asimina triloba*, Feb. 22, 1894. Flesh colored spores 18 to 22x3 μ (*Nuttall*, 1391, 361).

T. _____ sp.
Conidia of *Nectria verrucosa*. On dead twigs *Morus rubra* July 25, 1895 (*Nuttall*, 1827, 715).

T. Sambuci Corda.
On *Sambucus pubens*, Feb. 26, 1894 (*Nuttall*, 1409).

T. Celastri Schw.
On *Celastrus scandens*, April 25, 1895. Spores 5 to 6x2 μ (*Nuttall*, 1811).

DENDRODOCHIUM Bon.

D. affine Sacc.
On bark wet dead stumps, Oct. 24, 1893 (*Nuttall*, 1229, 174).

D. rubellum microsporum Sacc.

On dead limb *Magnolia acuminata*, Aug. 16, 1894, Short Creek, alt. 1,000 ft. On *Liriodendron Tulipifera* (*Nuttall*, 1659).

TUBERCULINA Sacc.

T. persicina (Ditm.) Sacc.

Parasitic on *Uredo* (Cæoma) *nitens*, that on *Rubus Baileyanus* June 10, 1894 (*Nuttall*, 1557, 527).

ILLOSPORIUM Mart

I. cæspitosum E. & E., Proc. Phila. Acad., 1894, 385.

TYPE HABITAT: On rotten log, Nov. 15, 1893 (*Nuttall*, discov. 1286, 231).

Sporodochia globose, 100 to 110 μ diameter, cespitose, forming tufts about 1 mm. diameter. Hyphæ 6 to 8 μ thick, branched, the branches curved or tortuous. Conidia globose or ovate 6 to 12 μ diameter.

Differs from *I coccinellum* Cke. in its color, and larger cespitose sporodochia.

HYMENULA Fr.

H. cerealis E. & E., Proc. Phila. Acad., 1894, 386.

TYPE HABITAT: On wheat straw *Triticum* sp. brought in from Painesville, Ohio, May 24, 1894 (*Nuttall*, discov. 1520, 495).

Sporodochia gelatinous, orbicular, yellowish-amber color becoming darker, at first sub-pulvinate, becoming depressed or flattened, .5 to .75 mm. diameter. Basidia slender, 25 to 30 x 1.25 μ simple or oftener branched. The branches erect. Conidia hyaline, oblong, minute, 3 to 4 x 1 to 1.25 μ.

CYLINDROCOLLA, Bon.

C. DENDROCTONI Peck, Flora, W. Va., 1892, 516.

TYPE HABITAT: On dead insects, *Dendroctonus frontalis*, beneath the bark of pine. Hampshire Co., near Romney, (*Millspaugh*).

The insects are probably killed by this fungus, as they lie dead in their burrows in the inner bark of the tree (*Pinus Virginiana*).

Sporodochia minute, forming irregular masses, soft, somewhat waxy, white or whitish; sporophores slender, abundantly branched above, often compacted below into a short stem-like base, spores catenulate, short cylindrical, subtruncate, colorless, .00016 to .0002 in. long, .00008 to .0001 in. broad.

On some of the insects there is a cottony or flocculent mass of white mycelium interwoven in a somewhat reticulate manner, and collected in strings or bundles. It bears no fruit but is probably a luxuriant growth of the mycelium of this fungus.

Occasionally the fungus seems to spread from the insect to bark immediately adjacent to it.

C. flagellaris E. & E. sp. nov.

TYPE HABITAT: On dead stem of *Helianthus decapetalus* Dec. 3, 1894 (*Nuttall*, discov. 1762, 650).

(*C. lactea* S. & E. partly, Sacc. No. 3550.)

Sporodochia gregarious, subglobose, subhyaline and gelatinous when fresh, lens-shaped, with a thin spreading margin, orbicular, .33 to .50 mm. diameter yellowish-amber color (whitish in the center) when dry. Sporophores densely fasciculate, flagelliform 2 to 3 times dichotomously branched, 80 to 100 μ long, separating into the short cylindrical, hyaline, 4 to 5 x 1 μ conidia.

This was included by Saccardo in Michelia II, p. 581, in *Cylindrocolla lactea*, S. &. E. (on rotten wood of *Kalmia*), but differs in the shape and color of the sporodochia and the sporophores only 2 to 3 times dichotomously branch. *C. lactea* retains its white color when dry, and resembles young *Lasiosphæria ovina*.

SCORIOMYCES Ell. & Sacc.

S. Cragini E. & S.

Under loose bark of dead *Hicoria* sp., Short Creek, alt. 1,250 ft., Nov. 21, 1893 (*Nuttall*, 1272, 219).

VOLUTELLA Tode.

V. ciliata (A. & S.) Fr.

On decaying leaves of *Prunus* cult. in grass, June 20, 1893 (*Nuttall*, 1010).

BACTRIDIUM Kunze.

B. FLAVUM K. & S.

Under decaying bark of *Quercus alba*, Monongalia Co., near Morgantown (*Millspaugh*).

HELISCUS Sacc.

H. Lugdunensis Sacc.

On dead limbs of *Ilex opaca*, thrown in wet places one year previously, March 16, 1894; sporodochia + 2 mm. diameter, conidia 30 to 33 x 5 μ (*Nuttall*, 1427, 400).

FUSARIUM Link.

F. CULMORUM Smith.

On heads of ripe living wheat. Monongalia Co., Laurel Point (*Millspaugh*).

"This specimen combines the characters of a number of so-called species, making it difficult to say which it really is. Probably they are all forms of one species." Professor Peck (in letter).

F. sarcochroum (Desm.) Sacc.

On *Acer Negundo*, April 24, 1894 (*Nuttall*, 1482, 462).

F. roseum Link.

On follicles of *Asclepias Syriaca*, May 31, 1894. Conidia 55 x 4 μ + 6-septate (*Nuttall*, 1530, 503).

F. SOLANI Mart.

Found associated with "black rot" on Tomato fruits that have fallen to the ground. Monongalia Co., at Morgantown, 1891 (*Millspaugh*).

F. roseum —— Var. nov?

On dead fruit of *Diospyros Virginiana*, Aug. 1895 (*Nuttall*, 1831, 721).

F. ———— sp.

On stems of *Asparagus officinalis*, Oct. 28, 1893. Color, light pink. Conidia oblong to obovate 7.5 to 10 x 2.5 μ (*Nuttall*, 1239, 1248, 185).

MICROCERA Desm.

M. erumpens E. & E., Proc. Phila. Acad., 1894, 386.

TYPE HABITAT: On dead limbs of *Tsuga Canadensis*, March, 1895 (*Nuttall*, discov. 1398, 371).

Sporodochia scattered, depressed-globose, .5 mm. diameter, at first covered by the epidermis, raising it into little whitish pustules, then erumpent and closely embraced by the ruptured epidermis, at first orange-red, then becoming nearly black, and finally leaving subcupuliform cavities in the bark, when dry. Conidia falcate to fusiform, multinucleate, and finally three or more septate, 60 to 83 x 3 to 4.5 μ hyaline, narrowing to a slender point at each end, borne on short sporophores (20 to 35 μ), which are more or less branched above.

Differs from *M. coccophila* Desm. in the shape of the sporodochia and their subcuticular origin.

(The additional description, incorporated in this relation of the specific characters, is by E. & E.)

EPICOCCUM Link.

E. purpurascens Ehrenb.

On cardboard box in grass, April 13, 1894 (*Nuttall*, 1453).

E. NEGLECTUM Desm.

On living leaves of *Avena sativa* and *Catalpa Catalpa*, Monongalia Co., at Morgantown, 1891 (*Millspaugh*).

E. Duriæanum Mont.

Underside of outer bark of *Robinia Pseudacacia*, Nov. 10, 1893 (*Nuttall*, 1285, 229).

EPIDOCHIUM Fries.

E. melanochlorum Desm. ?

On *Carex Fraseri*, Feb. 11, 1894 (*Nuttall*, 1376, 337).

TRIMMATOSTROMA Corda.

T. Americana Thum.

On *Salix nigra*, March 21, 1894 (*Nuttall*, 1437, 410).

HYPHELIA Fries.

H. terrestris Fr.

On damp ground. June 18, 1893 (*Nuttall*, 1016).

SPHÆROPSIDEÆ.

SPHÆRIOIDAECÆ.

PHYLLOSTICTA Pers.

P. Paviæ E. & E.

On *Aesculus octandra hybrida* and *Hamamelis Virginica*, June 10, 1894 (*Nuttall*, 1539). (*P. sphæropsidea E. & E.*)

P. caryigena Sacc.

P. Caryæ E. & E. On living leaves of *Hicoria avata* and *H. microcarpa*, June 30, 1894 (*Nuttall*, 1580).

P. Celtidis E. &. K.

On living leaves of *Celtis occidentalis*, Oct. 10, 1894 (*Nuttall*, 1715, 603).

P. Hamamelidis Pk.

On living leaves of *Hamamelis Virginica*, June 10, 1894 (*Nuttall*, 1556).

P. Catalpæ E. & M.

On living leaves of *Catalpa Catalpa*, July 25, 1895 (*Nuttall*, 1623).

P. Sanguinariæ Wint.

On living leaves of *Sanguinaria Canadensis*, June 29, 1894 (*Nuttall*, 1567).

P. Ipomœæ E. & K.

On *Ipomæa pandurata*, Sept. 19, 1895. Spores 5 to 10 x 2 to 2.5 μ (*Nuttall*, 1861, 749).

P. Haynaldi Roum.

On *Ilex verticillata*. Oct. 5, 1895. Spores 5 to 8 x 2.5 to 3 μ (*Nuttall*, 1872, 756).

P. Ribis E. & E. sp. nov.

TYPE HABITAT: On leaves of *Ribes* cult. Oct. 21, 1895 (*Nuttall* discov., 1882, 768).

Spots large, irregular in shape, .5 to 1 cm., or often confluent along the margin of the leaf for 2 cm., rusty brown, becoming whitish or grayish, and mostly zonate, definite but without any differently colored border. Perithecia epiphyllous, scattered, 150 to 200 μ diameter, the apex prominent and black. Sporules oblong-elliptical, hyaline, granular and nucleate, 15 to 22 x 6 to 9 μ.

Distinguished from *P. ribicola* Fr., and *P. Grossulariæ* Sacc. by its much larger sporules.

P. Galacis (Cke).*

On leaves of *Galax aphylla*, May 4, 1894 (*Nuttall*, 1486, 474).

P. Ipomœæ E. & K.

On *Ipomœa pandurata*, Sept. 19, 1895. Spores 5 to 10 x 2 to 2.5 μ (*Nuttall*, 1861, 749).

P. Haynaldi Roum.

On *Ilex verticillata*, Oct. 5, 1895. Spores 5 to 8 x 2.5 to 3 μ (*Nuttall*, 1872, 756).

P. Ampelopsidis E. & M.

On *Parthenocissus quinquefolia*, June 18, 1893 (*Nuttall*, 1014).

P. ASIMINÆ E. & K.

On living leaves *Asimina triloba*, Monongalia Co. near Camp Eden, 1891 (*Millspaugh*). On same host June 1, 1894, spores 8 to 10 x 6 μ (*Nuttall*, 1517).

P. Quercus-prini E. & E., Proc. Phila. Acad., 1894, 356.

TYPE HABITAT: On leaves *Quercus Prinus*, June 29, 1894 (*Nuttall*, discov. 1594, 542).

Spots orbicular, rusty brown, definite, with a very narrow border, 2 to 3 mm. diameter. Perithecia epiphyllous, scattered, erumpent, 90 to 110 μ diameter. Sporules ovate or oblong, hyaline, mostly a little curved, 5 to 6.5 x 2 to 2.5 μ.

This comes very near *Ph. Ludoviciana* E. & E., but in that species the spots are larger, perithecia more prominent below, and sporules rather larger. *Ph. marginalis* E. & E. also has similar sporules, but the perithecia are hypophyllous.

P. macrospora E. & E., Proc. Phila. Acad., 1894, 355.

TYPE HABITAT: On leaves of *Liriodendron Tulipifera*, Aug. 7, 1894 (*Nuttall*, discov. 1654, 574).

Spots few, suborbicular, ferruginous-gray, 3 to 5 mm. diameter, with a narrow, raised, darker border. Sporules oblong elliptical hyaline, nucleate, 15 to 30 (mostly 20 to 25) x 6 to 7 μ.

P. pirina Sacc.

On leaves *Pyrus Malus*, at Blue Sulphur Springs, July 25, 1894 (*Nuttall*, 1624).

P. Rosæ Desm.

On *Rosa humilis*. Spores 6 to 7.5 x 2.5 μ. Sept. 18, 1895 (*Nuttall*, 1863).

P. gentianicola.(DC).

On leaves of *Gentiana Andrewsii*, Sept. 19, 1895. Spores oval, 7.5 x 5 μ (*Nuttall*, 1857).

P. rhoicola E. & E., Proc. Phila. Acad., 1894, 356.

TYPE HABITAT: Rare, on leaves *Rhus radicans*, Aug. 18, 1894 (*Nuttall*, discov. 1668, 567 in part).

* *Phoma Galacis* Cke., Messrs. Ellis & Everhart decide from our specimens that this species belongs in Phyllosticta.

Spots 4 to 6 mm. diameter, deciduous, grayish-white, with a narrow black border. Perithecia epiphyllous, scattered, 100 to 110 μ diameter, convex-prominent above, visible also below. Sporules narrow-elliptical, hyaline, 2-nucleate, 5 to 6 x 2 to 3 μ.

Differs from *P. toxica*, E. & M., in its larger deciduous spots with a narrow border, and its narrow-elliptical sporules.

P. lindericola E. & E., Proc. Phila. Acad., 1894, 354.

TYPE HABITAT: On leaves *Benzoin Benzoin*, Aug. 26, 1894 (*Nuttall*, discov. 1688, 593).

Spots various; punctiform and minute without any definite border, often irregular in shape 1 mm. to 1 or 1.5 cm. diameter, or marginal, forming a narrow strip along the edge of the leaf for half its length, pale brown, nearly the color of weather-beaten wood, with a dark (almost black) border. Perithecia epiphyllous, hemispherical, 100 to 120 μ diameter, covered by the blackened epidermis which is raised into pustules barely pierced at the apex. Sporules oblong-elliptical, hyaline, 4 to 7 x 2 to 3 μ.

This differs in almost every respect from *Ph. Linderæ* E. & E.

P. Smilacis subeffusa E. & E.

On *Smilax rotundifolia*, Sept. 21, 1894 (*Nuttall*, 1701, 594). Perithecia scattered over surface of dead dry leaves of the host.

P. Oxydendri E. & E., sp. nov.

TYPE HABITAT: On leaves of *Oxydendron arboreum*, Oct. 10, 1894 (*Nuttall*, discov. 1717, 605).

Spots suborbicular or elliptical, reddish-gray, 3 to 8 mm. diameter, with a narrow, slightly raised dark red border, beyond which the leaf is generally shaded reddish-purple. Perithecia epiphyllous, subapplanate, 100 to 120 μ diameter. Sporules oblong-elliptical, 2-nucleate, hyaline, 7 to 8 x 2.5 to 3 μ. The spots finally become of a lighter, dirty-white color.

P. Celastri E. & E., sp. nov.

TYPE HABITAT: On leaves *Celastrus scandens*, Oct., 1894 (*Nuttall*, discov. 1718, 606).

Spots mostly marginal, 8.5 to 1 cm. diameter, ferruginous, definite, with a narrow, darker border. Perithecia epiphyllous, subapplanate, 150 μ diameter. Sporules oblong, 7 to 10 x 2 to 2.5 μ hyaline, 2-nucleate.

P. globifera E. & E., sp. nov.

TYPE HABITAT: On leaves *Cornus florida*, Oct. 24, 1894 (*Nuttall*, discov. 1728, 615).

Spots marginal, light-brown, continuous, extending across the tip of the leaf and partly down each side, 5 to 1 cm. wide, separated from the green part of the leaf by a narrow, purple margin. Perithecia amphigenous, discoid, black, 100 to 112 μ diameter. Sporules globose or short-elliptical, hyaline, granular, 6 to 8 x 5 to 6 μ.

P. Negundinis Sacc.

On *Acer Negundo*, July 5, 1894. Sporules 5 to 10 x 3 to 7.5 μ (*Nuttall*, 1631, 560, 561).

P. ———— sp.

On *Geum Canadense*, Oct. 24, 1894 (*Nuttall*, 1733). Spores irregular 4 to 7.5 x 1.5 to 2.5 μ 2-nucleate.

P. ACERICOLA E. & E.

On living leaves *Acer saccharinum*, Putnam Co., near Buffalo, 1891 (*Millspaugh*). On leaves *A. rubrum*, June 24, 1894 (*Nuttall*, 1561).

P. Xanthorrhizæ E. & Nuttall, sp. nov.

TYPE HABITAT: On leaves *Xanthorrhiza apiifolia*, Nov. 3, 1893 (*Nuttall*, discov. 1738, 625).

Spots subelliptical, dirty-white in the center with a dark shaded margin, 3 mm. to 1 cm. long x 2 to 8 mm. wide, finally more or less deciduous. Perithecia seated on the white part of the spots, epiphyllous, subdiscoid, perforated above, 60 to 75 μ diameter. Sporules oblong-elliptical, hyaline, 2-nucleate, 5 to 6 x 2.5 to 3 μ.

Accompanied by a Macrosporium on the same spots.

P. ———— sp.

On leaves *Rubus Canadensis*, Nov. 3, 1894. Sporules variable in form, 5 x 1.25 to 2 μ (*Nuttall*, 1747, 627).

P. cercidicola E. & E., sp. nov.

TYPE HABITAT: On leaves *Cercis Canadensis*, Nov. 21, 1894 (*Nuttall*, discov. 1751).

Spots suborbicular, .5 to 1 cm. diameter, rusty-brown, becoming lighter, paler below, margin narrow reddish-purple. Perithecia epiphyllous, convex, suberumpent, but covered (except the apex) by the epidermis, 110 to 150 μ diameter. Sporules oblong, slightly narrowed and rounded or obtusely pointed at the ends, hyaline, 2 to 3-nucleate, 15 to 20 x 6 to 7 μ.

Differs in the character of the spots, and in the presence of a perithecium, from *Gloeosporium Cercidis*, E. & E.

P. Araliæ E. & E., Proc. Phila. Acad., 1894, 355.

TYPE HABITAT: On leaves *Aralia spinosa*, Sept. 20, 1895 (*Nuttall*, discov. 1703, 598, 588?).

Spots suborbicular, light-brown with the margin a little darker, .5 to 1 cm. diameter. Perithecia epiphyllous, somewhat flattened, 100 to 150 μ diameter. Sporules oblong-elliptical, hyaline, 2-nucleate, 10 to 15 x 5 to 6 μ.

P. **Sassafras** Cooke.

On leaves *Sassafras Sassafras*, June 28, 1894. Sporules 5 to 7 x 2 to 3 μ (*Nuttall*, 1566).

P. **Sambuci** Desm.

On leaves *Sambucus Canadensis*, July 20, 1894 (*Nuttall*, 1614).

P. LABRUSCÆ Thum.

On living leaves *Vitis* cult. (Concord), Wood Co., near Lockhart's Run, 1891 (*Millspaugh*). On leaves of *V. æstivalis* and *rupestris*, June 29, 1894 (*Nuttall*, 1569).

P. cornicola (D. C.) Rabh.
On *Cornus florida*, Nov. 5, 1894 (*Nuttall*, 1748, 638).

P. Cookei Sacc.
On leaves *Magnolia acuminata*, Aug. 9, 1894. Sporules 15 to 20 x 6 to 7.5 μ (*Nuttall*, 1655, 577).

P. Tiliæ Sacc.
On leaves *Tilia Americana*, Aug. 10, 1894. Sporules 7 to 8 x 2.5 to 3 μ (*Nuttall*, 1672, 579).

P. Chionanthi Thum.
On *Chionanthus Virginica*, Aug. 10, 1895. Spots darker than in type (from Portugal). Spores round or oval, 5 μ or 7.5 x 5 μ (*Nuttall*, 1833, 724).

P. liriodendrica Sacc.
On leaves *Liriodendron Tulipifera*, June 16 and Oct. 29, 1894. Sporules 7.5 to 10 x 2 to 3 μ (*Nuttall*, 1571). *P. Liriodendri*, Cke.

P. Ulmi West?
On leaves *Ulmus pubescens*, July 9, 1894. Sporules + 16 x 7.5 μ (*Nuttall*, 1631, 563).

P. phomiformis Sacc.
On leaves *Quercus Prinus* and *Q. alba*, July 4, 1894. Sporules 15 to 30 x 6 to 8 μ (*Nuttall*, 1585).

P. Castaneæ E. & E., Proc. Phila. Acad., 1894, 357.
TYPE HABITAT: On leaves *Castanea pumila* (not on *Castanea vesca* as originally published), July 26, 1894 (*Nuttall*, discov. 1639, 570).
Spots orbicular, rust-color, with narrow dark-shaded margin. Perithecia epiphyllous, scattered on the spots, dark, semierumpent, 100 μ diameter, often collapsing. Sporules oblong, hyaline, 5 to 7 x 2 to 2.5 μ.

P. Lappæ Sacc.
On *Arctium Lappa*, July 20, 1894 (*Nuttall*, 1613).

P. Dioscoreæ Cooke.
On leaves *Dioscorea villosa*, June 29, 1894 (*Nuttall*, 1570).

P. opaca E. & E. sp. nov.
TYPE HABITAT: On leaves of *Ilex opaca*. Oct. 5, 1895 (*Nuttall*, discov., 1881).
Spots mostly marginal or terminal, of irregular shape, 1 to 2 cm. across, dirty-white, with a raised subferruginous narrow border. Perithecia evenly scattered, subepidermal, sublenticular, black, raising the epidermis into pustules, 200 μ diameter. Sporules elliptical, hyaline, 3 x 1.5 μ.
Differs from *P. Ilicis* E. & E. only in its minute sporules.

PHOMA Fries.

P. _____ sp.
On *Opulaster opulifolius*, May 7, 1894 (*Nuttall*, 1510, 494). Spores 7 to 10 x 2.5 to 3 μ.

P. negundinicola ramicola E. & E., Proc. Phila. Acad., 1894, 357.

TYPE HABITAT: On dead twigs *Acer Negundo*, April, 1894 (*Nuttall*, discov. 1483, 465, 466?).

Perithecia evenly but not thickly scattered, globose, small, .25 to .33 mm. diameter, covered by the slightly ruptured epidermis, but distinctly prominent. Sporules oblong, elliptical, or ovate, hyaline, with a single large nucleus, 10 to 13 x 4 to 5.5 μ.

Differs from the typical form, on the dead peduncles, in its broader sporules, the former being but 2.5 to 3 μ.

P. Pennsylvanica E. & E., Proc. Phila. Acad., 1894, 357.

TYPE HABITAT: On dead limbs *Acer Pennsylvanicum*, Feb. 2, 1894 (*Nuttall*, discov. 1361, 318).

Perithecia numerous, evenly scattered, subepidermal, .33 to .5 mm. diameter, whitish inside, raising the epidermis into minute pustules, but scarcely rupturing it. Sporules subglobose, 6 to 7.5 μ diameter, nearly hyaline.

P. Asclepiadea E. & E., sp. nov.

TYPE HABITAT: On dead stems of *Asclepias Syriaca*, Oct. 10, 1894 (*Nuttall*, discov. 1717, 604).

Perithecia thickly but evenly scattered, subelliptical, 110 to 120 μ in the longer diameter, subcuticular, covered by the blackened epidermis, which is raised into minute pustules but scarcely ruptured. Sporules oblong-elliptical, 2-nucleate, hyaline, 5 to 6 x 2 to 2.5 μ. On curved (almost hooked) basidia 12 to 15 μ long.

Differs from the next form which occurs with it on the same stems, in its larger perithecia and sporules and its curved basidia.

P. ——————— sp.

On dead stems *Asclepias Syriaca*, Oct. 10, 1894 (*Nuttall*).

P. melaleuca B. & C.

On petioles *Aralia spinosa*, April 25, 1895 (*Nuttall*, 1810).

P. leucostoma Lév.

On *Opulaster opulifolius*, May 13, 1894. Sporules 2.5 to 4 x 1 μ (*Nuttall*, 1506, 487).

P. mixta B. & C.

On fire-killed *Liriodendron Tulipifera*, Oct. 16, 1894. Sporules appendiculate at each end, 2-nucleate, 7 to 10 x 2 to 3 μ, oblong fusoid; the accompanying filiform process hooked at the apex, 20 x .75 to 1.5 μ (*Nuttall*, 1709).

P. scabra Sacc.

On *Platanus occidentalis*, March 30, 1894 (*Nuttall*, 1459, 434).

P. obscurans E. & E., Proc. Phila. Acad., 1894, 357.

TYPE HABITAT: On leaves of *Fragaria* cult., July 8, 1894 (*Nuttall*, discov. 1600, 554).

Spots 5 to 8 mm. diameter, with a ferruginous center and broad purple border, paler below. Perithecia few, scattered, convex-prominent. Sporules oblong-elliptical, hyaline 2-nucleate, 4.5 to 5.5 x 1.5 to 2 μ. Basidia simple, lanceolate-fusoid, 8 to 12 x 1.5 μ.

Phyllosticta fragaricola Desm. has similar sporules, but the spots are much smaller, with a white center. The basidia also indicate *Phoma* and not *Phyllosticta.*

P. ilicicola (C. & E.) Sacc.
On leaves of *Ilex opaca*, June 18, 1893 (*Nuttall*, 1017).

P. Spirææ Desm?
On *Opulaster opulifolius*, May 13, 1894. Sporules 10 to 13 x 2 μ (*Nuttall*, 1508, 489).

P. herbarum West.
On *Onagra biennis*, March 18, 1894 (*Nuttall*, 1435, 406).

P. Phytolaccæ B. & C.
On stems *Phytolacca decandra*, July 31, 1893 (*Nuttall*, 1140).

P. pedunculi E. & E., Proc. Phila. Acad., 1894, 357.
TYPE HABITAT: On old peduncles *Magnolia Fraseri*, Jan., 1894 (*Nuttall*, discov. 1339, 297).
Perithecia scattered, flattish pustuliform, .5 to .75 mm. diameter, with a prominent papilliform ostiolum. Sporules fusoid-oblong, hyaline, 2 to 3 nucleate, 7 to 11 x 2 to 2.5 μ ends acute.
Differs from *Stagonospora pedunculi* in its larger, flatter perithecia and fusoid-oblong (not cylindrical), rather shorter sporules.

P. uvicola B. & C.
On *Vitis* cult. (Concord), July 4, 1893 (*Nuttall*, 1108, 94).

P. nyssæcarpa Cooke.
On dead limbs *Nyssa aquatica*, April 15, 1895 (*Nuttall*, 1809, 696). Sporules 10 x 3 μ.

P. samararum Desm.
On samaras *Acer Pennsylvanicum*, Feb. 2, 1894 (*Nuttall*, 1363, 321).

P. smilacina (Peck) Sacc.
On *Smilax rotundifolia*, Aug. 17, 1894. Sporules about 18 x 6 to 7.5 μ (*Nuttall*, 1660).

APOSPHÆRIA Berk.

A. pezizoides E. & E., Proc. Phila. Acad., 1894, 358.
TYPE HABITAT: On decorticated trunks of *Platanus occidentalis*, *Salix nigra falcata*, *Betula nigra*, *Fraxinus sp.*, and *Liquidambar Styraciflua*, on abrasions made by driftwood and ice, where it seems to grow exclusively and always below high-water mark, April, 1894 (*Nuttall*, discov. 1458, 432).
Perithecia erumpent-superficial, seriate-aggregate, hemispherical, about .75 mm. diameter, with a distinct papilliform ostiolum, at length collapsing and pezizoid or discoid. Sporules elliptical or ovoid, 4 to 6 x 2.5 μ ends obtuse.

DENDROPHOMA Sacc.

D. Therryana Sacc. & Roum.
On *Platanus occidentalis*, April 19, 1894 (*Nuttall*, 1463).

SPHÆRONÆMA Fries.

S. Physocarpi E. & E., Proc. Phila. Acad., 1894, 358.
TYPE HABITAT: On dead stems *Opulaster opulifolius*, May, 1894 (*Nuttall*, discov. 1504, 484).
Perithecia gregarious, erumpent-superficial, hemispherical, 150 μ diameter, with a straight, stout beak 90 to 115 μ long. Sporules narrow-elliptical, hyaline, 2 to 3-nucleate, 7 to 9 x 2.5 μ.

S. infuscans E. & E. sp. nov.
TYPE HABITAT: On dead dry wood *Juglans cinerea.*, Dec. 5, 1894 (*Nuttall*, discov. 1766, 661).
Perithecia gregarious, erumpent-superficial, hemispherical, brownish-black, about .25 mm. diameter, with a short cylindrical (.33 mm.), shining-black, obtuse, perforated ostiolum. Sporules abundant, elliptical, continuous, hyaline 3 to 4 x 1.5 μ on basidia simple or branched below, about 12 μ long and .5 μ thick at the base, narrowed above.
The surface of the wood is blackened.

S. acerinum Peck.
On *Acer rubrum*, June 12, 1894 (*Nuttall*, 1543).

S. corneum C. & E.
On *Onagra biennis*, Jan. 21, 1895 (*Nuttall*, 1791, 682 in part).

S. Magnoliæ Peck.
On *Magnolia acuminata*, Short Creek, alt. 1,000 ft., Aug. 16, 1894 (*Nuttall*, 1658). Sporules 10 x 6 μ nucleus large.

SIROCOCCUS Preuss.

S. Halesiæ E. & E., Proc. Phila. Acad., 1894, 358.
On dead limbs *Mohrodendron Carolinum* (*Halesia tetraptera*), Feb. 26, 1894 (*Nuttall*, discov. 1407, 377, 376?).
Perithecia scattered, or 2 to 3-cornate, erumpent, subglobose, about .33 mm. diameter, black, with a minute papilliform ostiolum. Sporules subglobose, about 3 μ diameter, greenish-hyaline, 3 to 6-concatenate, the terminal sporule oblong and paler. Chains simple or sparingly branched, arising directly from the proliferous layer without any distinct basidia, collected in stellate clusters.

VERMICULARIA Fries.

V. phlogina Fairm.
On dead leaves *Phlox amœna*, Sept. 15, 1894 (*Nuttall* 1606).

V. compacta C. & E.
On *Rubus odoratus*, May 30, 1894; sporules 20 to 25 x 30 μ (*Nuttall*, 1513). On *Caulophyllum thalictroides* (552).

V. petiolorum Schw.

On *Aralia spinosa*, and on *Robinia Pseudacacia?* Feb. 17, 1894 (*Nuttall*, 1388, 356).

V. Toxica E. & E., sp. nov?

On *Rhus radicans*, Aug. 18, 1894 (*Nuttall*, 1669, 569).

V. Dematium (Pers.) Fr.

On *Cassia Marilandica*, Oct. 28, 1893 (*Nuttall*, 1251, 193). On *Heuchera Americana.*

V. Dematium ———— var.

On *Onagra biennis*, March 9, 1894 (*Nuttall*, 1434, 405).

V. Arctii Schw.

On dead leaves and petioles *Arctium Lappa*, on ground, July 21, 1894. Sporules fusiform slightly curved + or — 20 x 3 μ. Setæ 35 to + 125 x 3 to 5 μ (*Nuttall*, 1617).

V. subeffigurata Schw.

On fruit peduncles *Magnolia Fraseri* in association with STAGONOSPORA PEDUNCULI E. & E., July 25, 1893 (*Nuttall*, 1136).

V. subeffigurata scapincola Schw.

Bases of dead leaves *Yucca filamentosa* cult., Feb. 19, 1894. Sporules 18 x 2.5 μ, largest setæ 200 μ (*Nuttall*, 1367).

V. **Trautvetteriæ** Nuttall, sp. nov.

TYPE HABITAT: On dead leaves *Trautvetteria Carolinensis*, July 15, 1894 (*Nuttall*, discov. 1633).

Perithecia very small, scattered. Sporules curved, sharp pointed, 18 to 25 x 2.5 to 3 μ. Setæ + 100 x 10 μ.

V. liliacearum West.

On *Asparagus officinalis*, *Vagnera racemosa*, *Clintonia umbellulata* and *Iris cristata?* Nov. 1, 1893 (*Nuttall*, 1241, 188).

DOTHIORELLA Sacc.

D. Asiminæ E. & E., sp. nov.

On *Asimina triloba*, Feb. 2, 1894 (*Nuttall*, 1392, 362).

Sporules 5 to 7 x 2 to 3 μ oval or oblong, some of them slightly curved. Perithecia suberumpent, seriate, .25 mm. diameter, white inside and out, ovoid, in series of 3 to 5, raising the epidermis into short ridges split along the top so as to expose the pallid white apices of the perithecia. Sporules oval or elliptical, hyaline, 5 to 7 x 2 to 3 μ.

D. minor E. & E., sp. nov.

TYPE HABITAT: On dead limbs *Liriodendron Tulipifera* April 11, 1895 (*Nuttall*, discov. 1804, 691).

Perithecia seriate-subconfluent, .5 to .75 mm. diameter, irregularly ruptured above, white inside, erumpent, splitting the epidermis into short (2 to 4 mm.) longitudinal cracks. Sporules elliptical, hy-

aline continuous, 5 to 7.5 x 3 to 3.5 μ. Differs from *D. Liriodendri*, Cke. in its much smaller sporules.

D. **glandulosa** (Cooke) Sacc?

On *Robinia Pseudacacia*, March 14, 1894 (*Nuttall*, 1423, 395).

FUSICOCCUM Corda.

F. ilicinum E. & E., Proc. Phila. Acad., 1894, 359.

TYPE HABITAT: On dying, transplanted, *Ilex opaca* (transplanted Dec. 28, 1893), May 24, 1894 (*Nuttall*, discov. 1521, 496).

Stromata cortical, convex, about 1 or 1.5 mm. diameter, multilocular, whitish inside, the tuberculiform apex pierced with a single pore, rupturing the epidermis and slightly raising it. Sporules fusoid, hyaline, nucleate 15 to 22 x 2.5 to 3 μ.

CYTISPORA Ehrenb.

C. Celtidis E. & E., Proc. Phila. Acad., 1894, 360.

TYPE HABITAT: On dead limbs *Celtis occidentalis*, Feb. 2, 1894 (*Nuttall*, discov. 1358, 314).

Stroma valsoid, flat, thin, 1.5 to 2 mm. diameter, only penetrating the surface of the bark, multilocular, gray inside, raising the bark into small pustules, and finally rupturing it, cells resembling perithecia. Sporules allantoid, 6 to 7 x 1 to 1.5 μ.

C. Halesiæ E. & E., Proc. Phila. Acad., 1894, 361.

TYPE HABITAT: On dead limbs of *Mohrodendron Carolinum* (*Halesia tetraptera*), June 7, 1894 (*Nuttall*, discov. 1540).

Stromata convex-conical, sunk in the bark, orbicular, about 1 mm. diameter, white inside, unilocular, the inner surface of the cavity lined with simple, straight basidia about 15 μ long, bearing the oblong-fusoid, hyaline, 2-nucleate, straight, 5 to 7 x 1 to 1.5 μ sporules, which are expelled through a single orifice perforating the raised epidermis.

This probably is the spermogonial stage of *Diaporthe Halesiæ* or *D. tetraptera*, both of which are found in company with it.

C. leucostoma (Pers.) Sacc.

On cultivated *Prunus domestica* and *Amygdalus Persica*, Dec. 12, 1894 (*Nuttall*, 1769).

C. exasperans E. & E., Proc. Phila. Acad., 1894, 360.

TYPE HABITAT: On dead limbs *Acer Pennsylvanicum*, Feb. 2, 1894, Short Creek, alt. 1,300 ft. (*Nuttall*, discov. 1366).

Stroma buried in the bark, orbicular, about 1 mm. diameter, 4 to 6-celled (at length one-celled), prolonged above into a stout, conical beak opening by a single round pore at the apex. Sporules oblong or allantoid, hyaline, 5 to 7 x 1.25 μ.

C. ———— sp.

On *Chionanthus Virginica*, March 28, 1894 (*Nuttall*, 1455, 427).

C. Persicæ Schw.

On *Amygdalus Persica* cult. "Early Rivers," June 30, 1893 (*Nuttall*, 1106).

C. ———— sp.

On *Cercis Canadensis*, April 10, 1894 (*Nuttall*, 1471, 447). Spores 5 to 6 x .75 μ.

C. rhoina Fr.

On *Rhus hirta*, June 20, 1894. Sporules 5 to 8 μ (*Nuttall*, 1551, 636).

C. caryigena E. & E., Proc. Phila. Acad., 1894, 359.

TYPE HABITAT: On dead limbs *Hicoria ovata*, May 31, 1894 (*Nuttall*, discov. 1524, 513).

Stroma cortical, convex, 1.5 to 2 mm. diameter, slaty-black, 4 to 6-celled, cells yellowish-white, subglobose, small. Sporules allantoid, hyaline 3.5 to 4.5 x .75 to 1 μ.

(Spermogonia of *Valsa caryigena*, B. & C.)?

C. Rhois-hirtæ Nuttall, sp. nov.

On *Rhus hirta*, June 10, 1894 (*Nuttall*, 1533, 635).

This form is clearly distinct from *C. Rhoina* Fr. Cirrus reddish yellow. Perithecia very prominent. Spores 8 to 10 x 2 to 2.5 μ.

C. Sassafras E. & E. sp. nov.

TYPE HABITAT: On fire-killed twigs of *Sassafras Sassafras*, Dec. 20, 1894 (*Nuttall*, discov. 1766, 666). Jamaica, Long Island (F.C. Stewart).

Stromata thickly scattered, conical, rising from an orbicular base about 1 mm. diameter, the black, shining apices erumpent and roughening the bark, at first multilocular, becoming unilocular. Sporules allantoid, hyaline, only slightly curved, 4 to 5 x 1 μ borne on simple, straight basidia about 12 μ long.

C. betulina Ehr?

On *Betula nigra*, Feb. 20, 1894. Cirrus yellowish, sporules, 4 to 6 x 1 μ (*Nuttall*, 1396, 367).

C. Salicis (Corda) Rabenh?

On *Salix nigra*, March 22, 1894 (*Nuttall*, 1429).

C. Platani Fckl.

On *Platanus occidentalis*, March 14, 1894 (*Nuttall*, 1424, 396)

C. leucosperma (Pers) Fr.

On *Carpinus Caroliniana*, Nov. 17, 1893. Sporules 5 x 1 μ (*Nuttall*, 1257).

C. ceratophora Sacc.

On *Fraxinus Pennsylvanica*, Oct. 17, 1893 (*Nuttall*, 1234, 163).

C. Curreyi Sacc?

On *Pinus Virginiana*, Dec. 13, 1844; on *Tsuga Canadensis*, April 15, 1895 (*Nuttall*, 1771, 697).

C. coccinea (Reb.) Fr.
On *Robinia Pseudacacia*, Feb. 2, 1894. Sporules 3 x .75 μ (*Nuttall*, 1355).

C. ———— sp.
Spermogonia of *Valsa goniostoma* Sz.? On fire-killed *Liquidambar Styraciflua*, Oct. 21, 1895 (*Nuttall*, 1884).

C. orthospora B. & C?
On *Robinia Pseudacacia*, April 20, 1894. Sporules irregular in shape 12 to 18 x 2.5 to 3 μ (*Nuttall*, 1478, 458).

C. carphosperma Fr.
On *Asimina triloba*, Nov. 5, 1893 (*Nuttall*, 1292, 237).

SPHÆROPSIS Lév.

S. Linderæ Peck.
On dead twigs *Benzoin Benzoin*, April 8, 1895 (*Nuttall*, 1795).

S. Asiminæ E. & E., Proc. Phila. Acad., 1894, 361.
TYPE HABITAT: On dead limbs *Asimina triloba*, Feb. 24, 1894 (*Nuttall*, discov. 1397, 370).
Perithecia scattered or subseriate, buried in the bark which is raised into little pustules over them and soon ruptured. Perithecia small (.25 mm.) thick-walled, with an obscurely papilliform ostiolum. Sporules oblong-elliptical, brown, obtuse, 18 to 22 x 8 to 10 μ.

S. Asiminæ fructigena E. & E. var. nov.
TYPE HABITAT: On old dried-up fruits of *Asimina triloba*, Oct. 3, 1895 (*Nuttall*, discov. 1871, 755).
A fructigenous form of *S. Asiminæ* E. & E. Perithecia smaller than in the species (110 to 140 μ) and more abundant. Sporules a little larger (20 to 24 x 9 to 12 μ).

S. Ampelopsidis C. & E.
On *Parthenocissus quinquefolia*, March 30, 1894. Sporules 18 to 20 x 10 to 12 μ (*Nuttall*, 1460, 437).

S. cerasina Peck.
On *Prunus serotina*, alt. 1,200 ft., Nov. 22, 1894 (*Nuttall*, 1746).

S. Physocarpi E. & E., Proc. Phila. Acad., 1894, 361.
TYPE HABITAT: On dead *Opulaster opulifolius*, May 2, 1894 (*Nuttall*, discov. 1502, 482, 486).
Perithecia scattered, .33 mm. diameter, buried in the inner bark, with their apices and papilliform ostiola erumpent, white inside (at first), sometimes, as in the preceding species 2 to 3 confluent. Sporules varying from short-elliptical 12 to 15 x 10 μ to oblong or obovate-elliptical 15 to 20 x 10 μ.
Differs from *S. Nielliæ* E. & E. in its buried perithecia and much larger sporules.

S. celastrina Peck.
On branches *Celastrus scandens*, April 27, 1895 (*Nuttall*, 1812).

S. Œnotheræ E. & E., sp. nov.

TYPE HABITAT: On dead stems *Onagra biennis*, Jan. 21, 1895 (*Nuttall*, discov. 1792, 683).

Perithecia scattered, erumpent, superficial, globose, 200 to 225 μ diameter, with a papilliform ostiolum, occasionally subcollapsing above. Sporules oblong-elliptical, pale brown, 20 to 25 x 10 to 12 μ on stout basidia shorter than the sporules. There are indications that the sporules become finally uniseptate.

S. Sumachi (Schw.) C. & E.

On branches *Rhus hirta*, March 29, 1894. Sporules 20 to 26 x 8 to 12.5 μ (*Nuttall*, 1439).

S. Sassafras C. & E.

On *Sassafras Sassafras*, April 10, 1895. Sporules 23 x 10 μ (*Nuttall*, 1801, 688).

S. phomatella Peck.

On *Fraxinus Americana*, March 31, 1894 (*Nuttall*, 1441).

S. Caryæ C. & E.

On hickory barrel-hoop, April 9, 1894. Sporules 18 to 25 x 8 to 11 μ (*Nuttall*, 1448).

S. Ipomœæ E. & E., Proc. Phila. Acad., 1894, 362.

TYPE HABITAT: On dead peduncles of *Ipomœa pandurata*, Dec. 9, 1893 (*Nuttall*, discov. 1305, 249).

Perithecia scattered, ovate-globose, 250 to 300 μ diameter, the upper part prominent and closely covered by the shining black epidermis. Sporules elliptical, brown, 18 to 23 x 10 to 13 μ on pedicels of about the same length as the sporules.

S. Menispermi Peck.

On *Menispermum Canadensis*, Jan. 17, 1894 (*Nuttall*, 1343, 302).

CONIOTHYRIUM Corda.

C. Fuckelii Sacc.

On *Parthenocissus quinquefolia*, sporules globular, 2 to 2.5 μ March 31, 1894 (*Nuttall*, 1442).

C. concentricum (Desm.) Sacc?

On leaves *Yucca filamentosa*, Sept. 1, 1894 (*Nuttall*, 1187).

HAPLOSPORELLA Speg.

H. Celtidis E. & E., Proc. Phila. Acad., 1894, 362.

TYPE HABITAT: On dead limbs *Celtis occidentalis*, Feb. 2, 1894 (*Nuttall*, discov. 1359, 315).

Perithecia mostly in valsoid clusters of 3 to 10, small, 200 μ white inside, slightly sunk in the inner bark, their papilliform ostiola rupturing the epidermis. Sporules elliptical, brown, continuous, 18 to 22 x 10 to 12 μ on basidia of about the same length as the sporules.

H. Araliæ E. & E., Proc. Phila. Acad., 1894, 362.

TYPE HABITAT: On dead limbs *Aralia spinosa*, Feb. 26, 1894 (*Nuttall*, discov. 1406, 375).

Stromata seriate-connate, erumpent through longitudinal cracks in the bark, and extending from 4 to 5 mm. to 2 or more centimetres. Perithecia ovate-globose, buried in the black, subcarbonaceous stroma, 3 to 6 in each single stroma, about .33 mm. diameter. Sporules elliptical, brown, 20 to 25 x 10 to 12 μ.

This may be the pycnidia of *Botryosphæria fuliginosa* (M. & N.).

DIPLODIA Fries.

D. Liriodendri Peck.

On fire killed *Liriodendron Tulipifera*, Oct. 16, 1894 (*Nuttall*, 1710).

D. Salicina Lév.

On dead twigs *Salix nigra*, March 25, 1894 (*Nuttall*, 1457).

D. Cercidis E. & E., Proc. Phila. Acad., 1894, 363.

TYPE HABITAT: On dead limbs *Cercis Canadensis*, April 9, 1894. (*Nuttall*, discov. 1475, 449).

Perithecia subseriate, globose, .33 to .5 mm. diameter, slightly sunk in the inner bark and splitting the epidermis with short longitudinal clefts. Sporules elliptical, 20 to 23 x 10 to 15 μ on stout basidia, uniseptate.

D. infuscans E. & E., Proc. Phila. Acad., 1894, 363.

TYPE HABITAT: On bark of dead limbs *Fraxinus Americana*, April 27, 1894 (*Nuttall*, discov. 1492, 459).

Perithecia ovate-globose, small, 110 to 150 μ diameter, thickly scattered, blackening both the outer and inner surface of the bark. Ostiolum not conspicuous, obscurely papilliform. Sporules oblong-elliptical, 12 to 15 x 8 to 10 μ scarcely constricted.

In *D. inquinans* West, the sporules and perithecia are larger, and the bark is not blackened within.

D. atrata (Desm.) Sacc.

On dead limbs *Acer Negundo*, April 20, 1894 (*Nuttall*, 1465).

D. caryigena E. & E., Proc. Phila Acad., 1894, 363.

TYPE HABITAT: On dead limbs *Hicoria ovata*, May 31, 1894 (*Nuttall*, discov. 1525). Also Canada (Dearness).

Perithecia subseriate, sunk in the inner bark, covered by the epidermis, which is raised into pustules and ruptured, about .5 mm. diameter, black. Sporules elliptical, brown, uniseptate, scarcely constricted, 15 to 20 x 8 to 10 μ (Pycnidia of *Valsa caryigena* B. & C.)

D. viticola Desm.

On *Vitis*, March 26, 1894. No septum visible in sporules (*Nuttall*, 1443, 412).

D. ilicicola Desm.?

On *Ilex opaca*, Dec. 20, 1894. Sporules 22 to 25 x 11 to 13 μ (*Nuttall*, 1777, 667).

D. Rubi Fr.

On *Rubus* cult., Feb. 19, 1895. Sporules 20 x 8 to 12 μ (*Nuttall*, 1789).

D. inquinans West.

On *Fraxinus Americana*, April 27, 1894 (*Nuttall*, 1491, 459).

D. Juglandis Fr.

On *Juglans cinerea*, April 9, 1894 (*Nuttall*, 1449).

D. Maydis (Berk.) Sacc.

On *Zea Mays*, Aug. 10, 1895. Spores 30 x 4 μ (*Nuttall*, 1840, 729).

BOTRYODIPLODIA Sacc.

B. acerina E. & E., Proc. Phila. Acad., 1894, 363.

TYPE HABITAT: On dead limbs *Acer Pennsylvanicum*, Feb. 2, 1894 (*Nuttall*, discov. 1362, 319).

Perithecia erumpent in botryoidal clusters, often seriately confluent for 1 or more cm., about .5 mm. diameter, white inside, flattish above, with a broad papilliform ostiolum. Sporules elliptical, brown, uniseptate, 20 to 25 x 12 to 15 μ on basidia of about the same length.

B. ———— sp.

Stylosporus stage ? of *Pseudovalsa sigmoidea* (C. & E.). On dead limbs *Quercus Prinus*, with that species. Spores brown, 1-septate 25 x 12.5 μ (*Nuttall*, 1829).

ASCOCHYTA Lib.

A. clematidina Thum.

On *Clematis Virginiana*, Aug. 10, 1895 (*Nuttall*, 1842, 733).

ACTINONEMA Fries.

A Rosæ (Lib.) Fr.

On *Rosa* cult., June 27, 1894 (*Nuttall*, 1563).

HENDERSONIA Berk.

H. Lirella Cooke.

On *Salix nigra falcata*, April 23, 1894 (*Nuttall*, 1480, 460). Sporules 15 x 7.5 μ.

H. Desmazieri Mont.

On bark of limbs *Platanus occidentalis*, April 24, 1894. Sporules + 40 x 22 μ (*Nuttall*, 1466).

STAGONOSPORA Sacc.

S. petiolorum E. & E., Proc. Phila. Acad., 1894, 365.

TYPE HABITAT: On dead petioles *Aralia spinosa*, Feb. 17, 1894 (*Nuttall*, discov. 1389, 357).

Perithecia scattered, innate, small, slightly prominent and covered by the shining, blackened epidermis, 150 to 250 μ diameter,

mostly sub-elliptical. Sporules oblong, hyaline, nucleate, becoming one or more septate, 12 to 20 x 2 to 5 μ.

S. pedunculi E. & E., Proc. Phila. Acad., 1893, 457.

TYPE HABITAT: On old fruit peduncles *Magnolia Fraseri* (not LIRIODENDRON TULIPIFERA, loc. cit.). Short Creek, July 25, 1893 (*Nuttall*, discov. 1135, 119).

Perithecia gregarious, pustuliform, about .33 mm. diameter, covered by the blackened epidermis. Sporules cylindrical, 18 to 22 x 2 to 2.5 μ, multinucleate, hyaline, straight.

S. Physocarpi E. & E., Proc. Phila. Acad., 1894, 365.

TYPE HABITAT: On dead stems and limbs *Opulaster opulifolius*, May 12, 1894 (*Nuttall* discov. 1505, 485).

Perithecia scattered, depressed-hemispherical; 200 to 250 μ diameter, sunk in the bark, with the upper part prominent but covered by the epidermis, which is pierced by the papilliform ostiolum, white inside. Sporules linear, multiseptate, hyaline 25 to 35 x 3 to 4 μ.

S. collapsa (C. & E.) Sacc.

On *Acer saccharinum*, Jan. 26, 1894. Sporules 15 to 23 x 3 μ (*Nuttall*, 1353, 309).

S. ———— sp.

On *Chionanthus Virginica* (*Nuttall*, 1462, 440). Spores + 25 x 7 μ 4-septate. This may prove to be only a stylosporous stage of some Dothidaceous species—Ellis.

CAMAROSPORIUM Schulz.

C. Linderæ E. & E., sp. nov.

TYPE HABITAT: On dead limbs *Benzoin Benzoin*, April 15, 1895 (*Nuttall* discov. 1808, 694).

Perithecia scattered, semierumpent .75 mm. diameter, the upper part, except the papilliform, erumpent ostiolum, covered by the closely adherent epidermis, which is raised into distinct, hemispherical pustules. Sporules oblong, 3-septate with 1 to 2 cells divided by a longitudinal septum, brown, obtuse, not constricted 12 to 18 (mostly 12 to 15) x 5 to 7 μ. The perithecia are of a firm consistence and slaty-black inside.

SEPTORIA Fries.

S. Tecomæ E. & E., Proc. Phila. Acad., 1894, 367.

TYPE HABITAT: On leaves *Tecoma radicans*, Aug. 11, 1894 (*Nuttall*, discov. 1671, 580).

Spots light brown (wood color), irregular in shape, small, 1.5 to 2 mm., inconspicuous and indistinctly margined. Perithecia immersed, small (65 to 70 μ) barely visible with a lens. Sporules 40 to 50 x 2 to 2.5 μ, not strongly curved, *nucleate*, hyaline.

S. Brassicæ E. & E., sp. nov.

TYPE HABITAT: On leaves *Brassica nigra*, Nov. 26, 1894 (*Nuttall*, discov. 1759, 646).

Spots suborbicular or subangular, 3 to 4 mm. diameter, dull white with a narrow, darker and sometimes slightly raised border. Perithecia epiphyllous, numerous, sublenticular, pale brown, coarsely cellular, broadly perforated above, 100 to 115 μ diameter. Sporules numerous, curved, obtuse, continuous, hyaline, 25 to 45 x 2 to 3 μ.

Closely allied to *S. Sisymbrii* Ell., but that has the spots greenish at first and never becoming more than whitish and the sporules 1 to 3-septate.

S. RUBI West.

On living leaves *Rubus Canadensis*, Wood Co., Lockhart's Run, 1891 (*Millspaugh*). On same host July 26, 1894 (*Nuttall*, 1627).

S. Corni-maris Sacc.

On *Cornus florida*, alt. 1,700 ft., July 19, 1894 (*Nuttall*, 1612).

S. cornicola Desmz.

On *Cornus alternifolia*, Sewell Valley, Aug. 6, 1894 (*Nuttall*, 1647).

S. KALMIÆCOLA (Schw.) B. & C.

On living leaves *Kalmia latifolia*, 1891, Monongalia Co., at Camp Eden (*Millspaugh*).

S. ochroleuca B. & C.

On leaves *Castanea dentata*, June 30, 1894. Maximum number of perithecia in a single macula 20 (*Nuttall*, 1579).

S. microsperma Peck.

On *Betula lenta*, alt. 1,200 ft., Oct. 24, 1894. Sporules + 18 x .25 μ (*Nuttall*, 1722).

S. Polymniæ E. & E., Proc. Phila. Acad., 1894, 368.

TYPE HABITAT: On leaves *Polymnia Uvedalia*, June 29, 1894 (*Nuttall*, discov. 1595, 543).

Spots, scattered, angular, limited by the veinlets, 2 to 4 mm. diameter, dirty green. Perithecia epiphyllous, minute, 75 μ diameter, scattered, innate, inconspicuous. Sporules filiform, continuous, 35 to 50 x 1 to 1.25 μ.

S. Trautvetteriæ E. & E., Proc. Phila. Acad., 1894, 368.

TYPE HABITAT: On *Trautvetteria Carolinensis*, July 20, 1894 (*Nuttall*, discov. 1632, 564).

Spots irregular, subangular, partly limited by the veinlets of the leaf, often elongated and acute at one end, brownish-black, with an irregularly shaped white center, which is well defined, angular, 3 to 5 mm. in the longer diameter. Perithecia epiphyllous, but also visible below, small (65 to 75 μ), scattered, dark. Sporules abundant, nearly straight or slightly curved, continuous, 22 to 30 x 2 μ.

Differs from *S. Anemonis* Desm. in its broad, dark-margined white-centered spots, and rather longer and thicker sporules.

S. hyalina E. & E., Proc. Phila. Acad., 1894, 368.

TYPE HABITAT: On *Viola primulæfolia*, July 26, 1894 (*Nuttall*,

discov. 1641, 572). Also on *V. blanda*, Michigan (Hicks); and on *V. lanceolata*, *Massachusetts* (Miss Clarke).

Spots minute (.5 to 1 mm.) white, with a dark purple-shaded border. Perithecia punctiform, black, epiphyllous, subglobose, 65 to 75 μ diameter, not abundant. Sporules filiform, nearly straight, or slightly curved, hyaline, nucleate, not visibly septate, 26 to 40 (mostly 25 to 35) x 1 to 1.25 μ.

S. Violæ West, has yellowish-brown perithecia on pale zonate spots with a reddish-brown border.

S. aciculosa E. & E.

On *Fragaria* cult., Nov. 3, 1894. Sporules 15 to 25 x .75 μ (*Nuttall*, 1731).

S. Helianthi E. & K.

On *Helianthus decapetalus*, Oct. 29, 1894. Sporules 50 x 2 μ (*Nuttall*, 1723).

S. Leptostachyæ E. & K.

On leaves *Phryma Leptostachya*, July 4, 1894. Sporules 20 to 25 x 1 μ (*Nuttall*, 1584).

S. Nolitangere Thum.

On *Impatiens biflora*, Aug. 5, 1894. Sporules 20 to 25 x 1.5 to 2 μ (*Nuttall*, 1649).

S. Violæ West.

On *Viola sagittata*, June 30, 1893. Sporules + 25 x 1.25 μ (*Nuttall*, 1577).

S. Saxifragæ Pass.

On *Heuchera Americana*, June 10, 1894. Sporules 15 to 20 x 2.5 to 3 μ (*Nuttall*, 1544, 521).

S. Lobeliæ Peck.

On *Lobelia cardinalis*, June 22, 1894 (*Nuttall*, 1559).

S. Scrophulariæ Peck.

On *Scrophularia Marilandica*, June 10, 1894. Sporules 40 to 50 μ long (*Nuttall*, 1538).

S. VERBENÆ Rob. & Desm.

On leaves *Verbena urticæfolia*, Jefferson Co., near Shenandoah Junction (*Millspaugh*).

S. **psilostega** E. & M.

On *Galium circæzans*, July 14, 1894 (*Nuttall*, 1604).

S. **Nabali** B. & C?

On *Prenanthes serpentaria*, June 8, 1894 (*Nuttall*, 1536).

S. atro-purpurea Peck.

On *Aster cordifolius*, Nov. 24, 1894. Sporules + 35 to 55 x 1 to 1.5 μ (*Nuttall*, 1757, 644).

S. polygonorum Desm.

On *Polygonum Hydropiper*, June 8, 1894. Sporules 25 to 40 x 1.5 μ (*Nuttall*, 1537).

S. Smilaciniæ E. & M.

On *Vagnera racemosa* (SMILACINA), Aug. 14, 1894. Maculæ suffused with the marginal color late in season (*Nuttall*, 1252).

RHABDOSPORA Mont.

R. kalmiarum (Schw.)*

Sphæria Kalmianum Schw. On *Kalmia latifolia*, Aug. 26, 1894 (*Nuttall*, 1685, 590).

PHLYCTÆNA Mont. & Desm.

P. vagabunda Desm.

On *Vernonia Noveboracensis*, *Phytolacca decandra* and *Onagra biennis*, March 18, 1894 (*Nuttall*, 1436, 408).

P. septorioides Sacc.

On *Phytolacca decandra*, May 25, 1894 (*Nuttall*, 1498).

P. Ipomœæ E. & E., Proc. Phila. Acad., 1894, 369.

TYPE HABITAT: On calyx lobes *Ipomœa pandurata*, Dec. 9, 1894 (*Nuttall*, discov. 1305, 250).

Perithecia scattered, subcuticular, 75 to 80 μ diameter, covered by the blackened, slightly raised epidermis. Sporules linear, hyaline, curved above, 15 to 20 x 1.25 μ.

P. arcuata Berk.

On *Onagra biennis*, March 18, 1894. Sporules 30 to 35 x .75 μ (*Nuttall*, 1433, 403).

GELATINOSPORUM Peck.

G. betulinum Peck.

On *Betula lenta*, April 12, 1895. Sporules subfiliform nearly semicircular, 32 to 40 x 2.5 μ (*Nuttall*, 1797).

SPHÆROGRAPHIUM Sacc.

S. hystricinum (Ell.) Sacc.

On *Azalea viscosa*, May 4, 1894. Sporules narrowly arcuate-falcate 34 x 3· μ (*Nuttall*, 1501, 481).

S. Fraxini (Peck) Sacc.

On dead limbs *Fraxinus Americana*, Short Creek, alt. 1,300 ft., July 16, 1894. Sporules 50 to 60 x 2.5 μ (*Nuttall*, 1609).

NECTRIOIDACEÆ.

ASCHERSONIA Mont.

A. _____ sp.

On *Cornus florida*. Spores 3 to 5 x .75 μ (*Nuttall*, 1800, 687).

*Transferred to *Rhabdospora* by E. & E.

LEPTOSTROMACEÆ.

LEPTOTHYRIUM Kunze & Schm.

L. ———— sp.

On living leaves *Ilex opaca*, Aug., 1894 (*Nuttall*, 1679, 584). Maculæ white.

L. Liriodendri Cke.

On dead fallen leaves *Liriodendron Tulipifera*, April 17, 1895 (*Nuttall*, 1805).

L. dryinum Sacc.

On living leaves *Quercus rubra*, alt. 1,300 ft., June 29, 1894 (*Nuttall*, 1592, 540).

L. Castaneæ (Spr.) Sacc.

On fallen leaves *Castanea dentata*, April 17, 1895 (*Nuttall*, 1806).

L. petiolorum ———— var.

On dead leaves *Magnolia Fraseri*, April 11, 1895. Sporules 5 x 1 μ (*Nuttall*, 1802, 689).

L? foraminulatum Sacc. & Ell.

On fallen leaves *Ilex opaca*, Aug. 16, 1894. Sporules 25 x 3 μ (*Nuttall*, 1657).

L. vulgare (Fr.) Sacc.

On *Dioscorea villosa*, on *Aralia spinosa*, and on *Onagra biennis*. Sporules 5 to 7 x .75 μ on each host, Feb. 8, 1894 (*Nuttall*, 1368, 323).

SACIDIUM Nees.

S. Vitis E. & E., sp. nov.

TYPE HABITAT: On *Vitis cordifolia*, Nov. 6, 1893 (*Nuttall*, 1254, 198). Fungi Columbiani 290, N. A. F., 3067.

Perithecia scattered; scutellate not perforated, 180 to 220 μ diameter. Sporules oblong-cylindrical, straight or curved, 15 to 20 x 4 to 5 μ, filled with small nuclei.

In the specimens of *Sacidium viticolum*, B. & C. in Rav. F. Am. the sporules are ovate or elliptical, 6 to 7 x 5 μ, and the perithecia are only 75 to 100 μ diameter.

DISCOSIA Lib.

D. **Artoceras** (Tode) Fr.

On *Castanea dentata*, Oct. 20, 1893. On *Epigæa repens*, Jan. 18, 1894. On *Betula lutea*, *Fraxinus Pennsylvanica*, *Magnolia Fraseri*, *Cornus florida*, *Sassafras Sassafras*, and *Cephalanthus occidentalis* (*Nuttall*, 1228, 173).

D. MACULICOLA Ger.

On living leaves *Disporum lanuginosum*, Grant Co., near Bayard (*Millspaugh*). On *Smilax rotundifolia* and *Oxydendron arboreum*, July 8, 1894 (*Nuttall*, 1598).

D. rugulosa B. & C.

Parasitic on upper surface of the maculæ of *Phyllosticta caryigena*, July 2, 1894 (*Nuttall*, 1583).

ENTOMOSPORIUM Lév.

E. MACULATUM Lév.

On living leaves and fruits *Pyrus communis* cult., Monongalia Co., Morgantown (*Millspaugh*).

LEPTOSTROMELLA Sacc.

L. filicina (B. & C.) Sacc.

On *Dryopteris spinulosa*, May 4, 1894 (*Nuttall*, 1487).

EXCIPULACEÆ.

DINEMASPORIUM Lév.

D. hispidulum (Schrad.) Sacc.

On *Asimina triloba*, March 9, 1894. Sporules 14 to 18 x 2 to 2.3 μ (*Nuttall*, 1422, 394).

MELANCONIACEÆ.

HAINESIA Ell. & Sacc.

H. Rubi (West).

On leaves of *Rubus* cult. Oct. 28 1895 (*Nuttall*, 1880).

GLŒOSPORIUM Desm. & Mont.

G. ——— sp.

On leaves of *Cercis Canadensis* (*Nuttall*, 985). Sporules 18 x 7.5, + 20 x 7.5, 23 x 7, 25 x 6 μ.

G. Sanguinariæ E. & E., Proc. Phila. Acad., 1894, 371.

TYPE HABITAT: On leaves *Sanguinaria Canadensis*, July 8, 1894 (*Nuttall*, discov. 1601, 555).

Spots yellow, oblong or irregular, 3 to 5 mm. diameter, situated near the apex of the leaf which is more or less uniformly blackened. Acervuli epiphyllous, numerous, innate, yellow and conspicuous. Conidia oblong, hyaline, continuous, mostly a little curved, 8 to 15 x 3.5 to 5.5 μ.

G. aridum E. & H.

On *Fraxinus Pennsylvanica*, June 10, 1894 (*Nuttall*, 1545, 518).

G. Rumicis E. & E., sp. nov.

TYPE HABITAT: On leaves *Rumex obtusifolius*, Oct. 27, 1894 (*Nuttall*, discov. 1729, 617).

Spots reddish-brown, lighter in the center, more or less distinctly zonate 3 to 4 mm. diameter, margin darker. Acervuli innate, small. Sporules erumpent above, oblong, hyaline, continuous, 5 to 8 x 2 to 2.5 μ.

The spots resemble those of *Ovularia obliqua* Cke., on *Ramularia decipiens* E. & E.

G. Alni E. & E., sp. nov.

TYPE HABITAT: On living leaves *Alnus rugosa*, Nov. 24, 1894 (*Nuttall*, discov. 1737, 624).

Spots dirty drown, suborbicular, indistinctly zonate, .5 to 1 cm. diameter, paler in the center, border concolorous, rather indefinite; acervuli epiphyllous, numerous, small, 100 to 120 μ diameter, chestnut color, becoming darker; conidia oblong-elliptical, 12 to 16 x 6 to 8 μ.

Differs from *G. cylindrospermum* Bon., on the same host, in its much broader conidia, and from *G. rubicolum* E. & E. in the different character of the spots and rather broader conidia.

G. nervisequum (Fckl.) Sacc.

On leaves *Platanus occidentalis*, June 10, 1894. Sporules 12.5 to 18 x 4 to 6 μ (*Nuttall*, 1555, 526).

G. Robergei Desm.

On *Carpinus Caroliniana*, July 16, 1894 (*Nuttall*, 1608).

G. betularum Ell & Mart.

On *Betula nigra*, sporules 10 x 7 μ, July 16, 1894 (*Nuttall*, 1607).

G. cylindrospermum Bon.

On leaves of *Alnus rugosa*. Spores 8 to 10 x 2 to 2.5 μ (*Nuttall*, 1875).

G. venetum Speg.

On living leaves of *Rubus strigosus*, Sept. 19, 1895 (*Nuttall*, 1859).

G. rubicolum E. E., sp. nov.

TYPE HABITAT: On leaves of *Rubus strigosus* (*Nuttall*, discov. 747).

Spots at first numerous, angular, small and yellowish or reddish-yellow, soon confluent forming large brown, dry, dead spots of irregular shape and indefinite outline, occupying a large part of the leaf. Acervuli not numerous, scattered, epiphyllous, prominent, resembling perithecia; conidia oblong-elliptical, 12 to 16 x 6 to 7 μ.

Differs from *G. Rubi* E. & E. in its larger, fewer black acervuli and broader conidia, which also are about twice as large as in *G. Venetum* Speg.

MYXOSPORIUM Link.

M. luteum E. & E., Proc. Phila. Acad., 1893, 458.

TYPE HABITAT: On bark *Hicoria ovata*, April to July, 1893 (*Nuttall*, discov. 1015, 79). E. & E. N. A. F. 2953. Fungi Columbiani 150.

Stroma globose-conical, light yellow, .75 to 1 mm. diameter, slightly sunk in the inner bark, unilocular and opening by a single pore. The surface of the inner bark around this pore is of a pale slate color, the colored portion definitely limited by a black line

so as to form an irregular circle about 2 mm. across, but this line does not penetrate the bark. Sporules navicular-oblong, hyaline, obtuse, 10 to 11 x 4 to 5 μ with 1 to 2 large nuclei. Basidia slender-cylindrical 15 to 20 x 1.5 μ. Mass of exuded sporules flesh color.

M. Rhois (B. & C.) Sacc.

On fire killed *Rhus hirta*, June 20, 1895 (*Nuttall*, 1575, 537).

M. platanicolum E. & E., Proc. Phila. Acad., 1894, 372.

TYPE HABITAT: On limbs *Platanus occidentalis*, April 24, 1894 (*Nuttall*, discov. 1485, 467).

Acervuli subcutaneous, vesiculoid, pale, 1 mm. diameter, raising the ruptured epidermis into pustules but not erumpent. Sporules oval or oblong-ovate, hyaline, nucleate at first, 10 to 12 x 5 to 6 μ, on stout basidia.

M. seriatum E. & E., Proc. Phila. Acad., 1894, 372.

TYPE HABITAT: On bark of *Acer* sp., June, 1894 (*Nuttall*, discov. 1552, 523).

Nuclei pallid, orbicular, about 1 mm. diameter, seated on the surface of the inner bark; surrounded by a thin layer of smoky colored radiating hyphæ, from the inner extremities of which the botuliform or oblong, 6 to 8 x 2 to 2.5 μ hyaline conidia are produced. The nuclei are seriately arranged, and the pale flesh-colored, flattish cirrhi are erumpent through narrow, longitudinal cracks in the bark.

COLLETOTRICHUM Corda.

C. LINDEMUTHIANUM (S. & M.) Scrib.

On pods of *Phaseolus* cult. "Wax, Butter Bean." Monongalia Co., near Morgantown, 1891 (*Millspaugh*).

C. _____ sp.

On *Sassafras Sassafras*, Oct. 15, 1894. Sporules 8 to 18 x 4 to 7 μ (*Nuttall*, 1714, 602).

C. lineola Corda.

On *Zea Mays*, Aug. 10, 1895 (*Nuttall*, 1834, 726).

CYLINDROSPORIUM Ung.

C. Cratægi E. & E., Proc. Phila. Acad., 1894, 372.

TYPE HABITAT: On leaves *Cratægus* sp., July 26, 1894 (*Nuttall* discov. 1640, 571).

Leaves more or less mottled with rusty red, at length uniformly of this same color. Acervuli innate, erumpent on both sides, and whitening the surface of the leaf with abundantly discharged conidia, which are 75 to 100 x 3 to 3.5 μ, nearly straight or more or less undulate and curved, nucleate, and faintly 3 to 5 septate.

C. Toxicodendri (Curtis) E. & E. Proc. Phila. Acad., 1893, 460.

On leaves *Rhus radicans*, June 29, 1894. Sporules, largest, 50 x 3 μ (*Nuttall*, 1568).

LIBERTELLA Desm.

L. FAGINEA Desm.

On bark of dead *Fagus atropunicea*, Grant Co., near Bayard (*Millspaugh*). On dead *Prunus* sp. cult. Aug. 10, 1895. Cirrus bright red. Sporules variously curved 15 to 25 x 1 μ (*Nuttall*, 1843, 734).

L. ———— sp.

On felled *Robinia Pseudacacia*, April 4, 1894. Sporules 15 to 20 x .75 to 1 μ (*Nuttall*, 1470, 446).

L. acerina Westend.

On *Acer rubrum* or *saccharinum*, April 4, 1894. Sporules hyaline, 15 to 18 x 1 μ (*Nuttall*, 1445).

MELANCONIUM Link.

M. pallidum Peck.

On dead limbs *Hicoria ovata*. Sporules + 20 x 5 μ, May 31, 1894 (*Nuttall*, 1514).

M. oblongum Berk.

On dead limbs *Juglans cinerea*. Sporules 20 x 10 to 2 μ, Dec. 5, 1893 (*Nuttall*, 1291, 236).

M. bicolor Nees.

On *Betula nigra*, May 2, 1894 (*Nuttall*, 1489).

THYRSIDIUM Mont.

T. hedericolum Carpini Sacc.

On dead shoots *Carpinus Caroliniana*, May 2, 1894 (*Nuttall*, 1486).

MARSONIA Fisch.

M. Juglandis (Lib.) Sacc.

On *Juglans cinerea*, June 22, 1894 (*Nuttall*, 1560).

M. Martini Sacc. & Ell.

On *Quercus alba, velutina, et Prinus*, Aug. 18, 1894 (*Nuttall*, 1674, 583).

CORYNEUM Nees.

C. cupulatum E. & E., Proc. Phila. Acad., 1894, 374.

TYPE HABITAT: On dead limbs *Tsuga Canadensis*, Short Creek, Dec. 16, 1893 (*Nuttall*, discov. 1317, 272).

Erumpent superficial. Acervuli tuberculiform, black, 1 to 1.5 mm. diameter, hollowed out so as to be cup-shaped above. Conidia clavate, sessile, 6 to 9 septate, brown, 60 to 80 x 12 to 15 μ.

C. pustulatum Peck.

On dead limbs *Castanea dentata*, Dec. 7, 1893 (*Nuttall*, 1383).

PESTALOZZIA De Not.

P. ———— sp.

On leaves *Geum Canadense*, Oct. 24, 1894 (*Nuttall*, 1734). Sporules 20 x 6 μ. Setæ 5 to 12 μ long.

P. funerea Desm.

On *Ipomœa pandurata*, Sept. 19, 1895. Spores 23 to 25 x 6 to 7.5 μ (*Nuttall*, 1862, 750).

P. Guepini Desm.

On leaves *Rhododendron maximum*, *R. Catawbiense* and *Azalia viscosa*. Spores 18 to 20 x 8 μ, Aug. 2, 1894 (*Nuttall*, 1149

P. Jefferisii Ell?

On *Opulaster opulifolius*, sporules 10 to 15 x 4 to 5 and 25 x 5 μ May 7, 1894 (*Nuttall*, 1509).

P. Toxica E. & E., Proc. Phila. Acad., 1894, 374.

TYPE HABITAT: On leaves *Rhus radicans*, Aug. 18, 1894 (*Nuttall*, 1670, 567).

Spots and perithecia as in *Phyllosticta rhoicola* E. & E. Sporules clavate-oblong, 4-septate, 12 to 15 x 4 to 5 μ, 3 intermediate cells pale brown, end cells short, conical, hyaline, the upper cell with a crest of 3 short, spreading hyaline bristles 6 to 7 μ long. Distance between the two extreme cells 12 μ, pedicels shorter than the spores.

STEGANOSPORIUM Corda.

S Castaneæ Lib?

On *Castanea dentata*, Nov. 14, 1893 (*Nuttall*, 1275, 221).

S. piriforme (Hoffm.) Corda.

On dying *Acer rubrum*, June 12, 1894 (*Nuttall*, 1553).

S. muricatum Bon.

On dead limbs *Betula nigra* in drift-wood along river, Oct. 21, 1895. Spores 35 to 50 x 15 to 18 μ (*Nuttall*, 1878).

USTILAGINACEÆ.

USTILAGO Pers.

U. SEGETUM (Bull.) Dittm.

On living heads of wheat and oats, Monongalia Co., near Morgantown; Lewis Co., near Alum Bridge; Taylor Co., near Thornton (*Millspaugh*).

U? ——— sp.

On under surface of newly fallen leaves *Asimina triloba*, Nov. 20, 1893 (*Nuttall* discov. 1288, 233).

U. MAYDIS (DC.) Corda.

On living ears and tassels of sweet corn, prevalent in Monongalia Co., 1891; near Morgantown (*Millspaugh*). On garden corn, July 31, 1894 (*Nuttall*, 1636).

U. Avenæ lævis, K. & S.

On oats, Sewell Mountain, alt. 2,600 ft., Aug. 23, 1894 (*Nuttall*, 1678).

TILLETIA Tul.

T. TRITICI (Bjerk.) Wint.
Ustilago tritici, C. Bauhin. On living leaves of wheat, Monongalia Co., near Morgantown (*Millspaugh*).

UROCYSTIS Rabenh.

U. ANEMONES (Pers.) Schrœt.
On living leaves and under stem cuticle of *Actæa alba*, Monongalia Co., near Morgantown (*Millspaugh*).

UREDINACEÆ.

UROMYCES Link.

U. Polygoni (Pers.) Fckl.
Uredospores on *Polygonum erectum*, Aug. 2, 1894 (*Nuttall*, 1642).

U. TRIFOLII (Hedw.) Lev.
On living leaves, *Trifolium pratense*, Mason Co., near Point Pleasant (*Millspaugh*). On *Trifolium*, July 13, 1894 (*Nuttall*, 1604).

U. APPENDICULATUS (Pers.) Link.
On living leaves of pole beans, Monongalia Co., near Morgantown (*Millspaugh*).

U. Caladii (Schwein) Farl.
On *Arisæma triphyllum* (uredospores), May 28, 1894 (*Nuttall*, 1511).

U. Hyperici (Schwein) Curt.
Æcidiospores on *Hypericum mutilum*, at Rupert's, July 25, 1894 (*Nuttall*, 1625).

U. Terebinthi (DC.)
On living leaves *Rhus radicans*, Oct. 17, 1895 (*Nuttall*, 1876).

U. LESPEDEZÆ (Schwein) Peck.
On living leaves *Lespedeza violacea*, Monongalia Co., near Morgantown (*Millspaugh*).

U. HEDYSARI-PANICULATI (Schwein) Farl.
On living leaves *Meibomia canescens*, Mason Co., near Point Pleasant (*Millspaugh*). On leaves *M. paniculata*, July 17, 1894 (*Nuttall*, 1610).

U. Howei Pk.
On *Asclepias Syriaca*, Oct. 13, 1895 (*Nuttall*, 1869).

MELAMPSORA Cast.

M. farinosa (Pers.) Schrœt.
On *Salix nigra*, Oct. 17, 1893. Spores at first hyaline (22 x 13 μ) but the granules finally turn yellow (22 μ), and perfectly fill the spore (25 x 18 μ) (*Nuttall*, 1107).

PUCCINIA Pers.

P. Helianthi Sz.

On *Helianthus decapetalus*, Sept. 19, 1895 (*Nuttall*, 1851).

P. Violæ (Schum.) DC.

On *Viola hastata*, æcidial stage; æcidia 18 x 25 μ. A species of small reddish caterpillar found feeding on the spores, April 30, 1893. Uredo stage on *Viola rotundifolia* or *V. blanda*, April 30, 1893 (*Nuttall*, 906).

P. Convolvuli (Pers.) Cast.

On *Convolvulus repens*. Æcidium May 3, Uredo June 14, Teleuto. Oct. 4, 1894; all on same vine (*Nuttall*, 1516).

P. Convolvuli ——— var.

On dead stems of *Convolvulus repens*, Feb. 19, 1895 (*Nuttall*, 1793).

P. PIMPINELLÆ (Strauss) Link.

On living leaves *Osmorrhiza Claytonii*, Monongalia Co. near Morgantown (*Millspaugh*).

P. Menthæ Pers.

On *Cunila origanoides*, Nov. 27, 1894. Teleutospores 28 x 20 μ, not yet verruculose (*Nuttall*, 1753).

P. coronata Corda.

On *Holcus lanatus*, Uredo. June 30, 1893; teleuto. Nov. 1, 1893, on same specimen. Length of pedicel 5 to 7.5 μ very thick, corona + 38 μ broad, teeth 12.5 μ, teleutospores 50 x 15 μ (*Nuttall*, 1265).

P. RUBIGO-VERA (DC.) Wint.

On leaves *Triticum vulgare*, Wood Co., near Kanawha Station (*Millspaugh*).

P. Caricis (Schum.) Reb.

On *Carex* sp. July 10, 1894, uredospores and teleutospores (*Nuttall*, 1590).

P. HIERACII (Schum.) Mart.

P. flosculosorum Roehl. On living leaves *Carduus lanceolatus*, Mason Co., near Point Pleasant (*Millspaugh*). On *Taraxacum Taraxacum*, Oct. 20, 1894 (*Nuttall*, 1721).

P. SUAVEOLENS (Pers.) Rostr.

On living leaves *Carduus lanceolatus*, Wood Co., near Kanawha Station (*Millspaugh*).

P. Sorghi Schwein.

Uredo. and teleutospores on *Zea Mays*, Sept. 7, 1894 (*Nuttall*, 1676).

P. Conoclinii Seymour.

On *Eupatorium cœlestinum*, Sept. 18, 1895 (*Nuttall*, 1849).

P. Anemones-Virginiana Sz.

On *Anemone Virginiana*, Sept. 18, 1895 (*Nuttall*, 1850).

P. Heuchera Sz.
P. Spreta Pk., *P. Tiarella* B. & C. On *Tiarella cordifolia*. Oct. 21, 1895 (*Nuttall*, 1886).

P. Smilacis Schwein.
Uredospores on *Smilax glauca*, Oct. 14, 1894 (*Nuttall*, 1708).

P. Podophylli Schwein.
On *Podophyllum peltatum*, May 31, 1894 (*Nuttall*, 1515).

P. tenuis Burrill.
On *Eupatorium ageratoides*, June 1, 1894 (*Nuttall*, 1519).

P. Asteris Duby.
On *Aster cordifolius*, Nov. 24, 1894 (*Nuttall*, 1758, 645).

GYMNOSPORANGIUM, Hedw.

G. clavariiforme (Jacq.) Rees.
Æcidiospores on *Cratægus* sp., Aug. 2, 1894 (*Nuttall*, 1637).

G. juniperinum (Linn.) Fr.
Teleutospores on *Juniperus Virginiana*, April 27, 1894 (*Nuttall*, 1473).

G. MACROPUS Link.
On *Juniperus Virginiana*, Mercer Co., near Princeton (*Millspaugh*). Æcidia on *Pyrus coronaria*, Aug. 2, 1893 (*Nuttall*, 1157).

PHRAGMIDIUM Link.

P. POTENTILLÆ (Pers.) Karst.
On *Potentilla Canadensis*, uredospores, Monongalia Co., near Morgantown (*Millspaugh*). On *P. Canadensis*, uredo. March 15, 1894, teleutospores, Oct. 5, 1894 (*Nuttall*, 1400?).

P. subcorticium (Schrank.) Wint.
On *Rosa humilis*, June 18, 1893 (*Nuttall*, 1008).

COLEOSPORIUM Lev.

C. SENECIONIS (Pers.) Fr.
On living leaves of *Pinus echinata* (æcidia), Wood Co., near Lockhart's Run (*Millspaugh*).

C. SONCHI (Pers.) Lev.
On living leaves *Vernonia Noveboracense*, Mason Co., near Point Pleasant (*Millspaugh*). On *Aster cordifolius*, Dec. 3, 1894 (*Nuttall*, 1760).

C. Ipomœæ (Schwein) Burrill.
On *Ipomœa pandurata*, Oct. 15, 1894. Spores 85 x 23 μ (*Nuttall*, 1720, 608).

C. Vernoniæ B. & C.
On *Vernonia Noveboracense* at Rupert's, Sept. 25, 1894. Spores 100 x 30 μ (*Nuttall*, 1702, 595).

C. Solidaginis (Schwein.) Thum.
On *Solidago Canadensis*, June 19, 1894 (*Nuttall*, 1550).

ÆCIDIUM Pers.

Æ. Impatientis Schwein.
On *Impatiens biflora*, June 21, 1894 (*Nuttall*, 1558).

Æ. HOUSTONIANUM Schwein.
On *Houstonia cærulea* (spermogonia), Monongalia Co., near Morgantown (*Millspaugh*). On leaves of *H. longifolia*, June 1, 1894 (*Nuttall*, 1518).

PERIDERMIUM Lev.

P. PECKII Thum.
On living leaves *Tsuga Canadensis*, Pocahontas Co., near Traveler's Repose (*Millspaugh*).

P. BALSAMEUM Peck.
Under surface living leaves *Abies Balsamea*, Randolph Co., Shades-of-Death (*Millspaugh*).

UREDO Pers.

U. Agrimoniæ (DC.) Schroet.
On *Agrimonia striata*, July 10, 1894 (*Nuttall*, 1591).

U. CÆOMA NITENS Schwein.
Cæoma nitens. On living leaves *Rubus hispidus*, Monongalia Co., near Morgantown (*Millspaugh*). On *Rubus villosus*, May 2, 1893 (*Nuttall*, 907).

PERISPORIACEÆ.

PODOSPHÆRA Kunze.

P. OXYACANTHÆ (DC.) De By.
On living leaves of *Prunus* cult., *Cratægus oxyacantha* and *Diospyros Virginiana*, Monongalia Co., near Morgantown (*Millspaugh*).

P. TRIDACTYLA (Wallr.) DeBy.
On living leaves of *Prunus* cult., Cabell Co., near Huntington (*Millspaugh*).

SPHÆROTHECA Lev.

S. HUMULI (DC.) Burrill.
On living leaves *Agrimonia striata*, Preston Co., near Terra Alta (*Millspaugh*).

S. Castagnei Lev.
On living leaves *Erechtites hieracifolia*, Nov. 11, 1894. Asci 78 x 58 μ, spores+20 x 12 μ (*Nuttall*, 1740).

PHYLLACTINIA Lev.

P. suffulta (Reb.) Sacc.
On living leaves *Castanea dentata*, Oct. 1893 (*Nuttall*, 1315), and on *Magnolia Fraseri*.

UNCINULA Lev.

U. AMPELOPSIDIS, Peck.
On cultivated grapes, Monongalia Co., near Morgantown (*Millspaugh*). On leaves *Parthenocissus quinquefolia*, Sept. 20, 1894 (*Nuttall*, 1683).

U. Americana How.
On leaves *Vitis cordifolia*, Sept. 20, 1894 (*Nuttall*, 1684).

MICROSPHÆRA Lev.

M. Alni (DC.)
On leaves *Castanea dentata*, alt. 1,800 ft., Oct. 20, 1893 (*Nuttall*, 1218, 169).

M. erineophila Peck.
On leaves *Fagus atropunicea*, Dec. 20, 1894 (*Nuttall*, 1773).

M. Grossulariæ Lev.
On leaves *Sambucus Canadensis*, Oct. 5, 1894 (*Nuttall*, 1693).

M. elevata Burr. and Bess.
On leaves of *Catalpa Catalpa*, alt. 2,200 ft. Oct. 2, 1894 (*Nuttall*, 1690).

M. Russellii Clint.
On *Oxalis stricta*, Aug. 9, 1694 (*Nuttall*, 1650).

M. Vaccinii Schw.
On *Epigæa repens*, Oct. 1893. Threads slender, sharply pointed, somewhat rough, asci 5-spored, 50 to 65 x 30 to 40 μ, spores 18 to 20 x 10 to 11 μ (*Nuttall*, 1255).

M. quercina Schw.
On *Quercus palustris*, at Rupert's, Aug. 26, 1894 (*Nuttall*, 1686, 591).

ERYSIPHE (Hedw.) DC.

E. Cichoracearum DC.
On *Xanthium Canadense*, Nov. 1, 1893 (*Nuttall*, 1223), and on *Eupatorium purpureum*.

E. communis (Wall.) Fr.
On *Eupatorium ageratoides*, Oct. 14, 1894 (*Nuttall*, 1707).

E. GRAMINIS DC.
On living leaves *Poa pratensis*, Preston Co., near Terra Alta (*Millspaugh*).

E. Liriodendri Schw.
On *Liriodendron Tulipifera* in deep shade, Short Creek, alt. 1,150 ft., Oct. 9, 1894 (*Nuttall*, 1697).

EUROTIUM Link.

E. herbariorum (Wigg) Link.
On damp leaves *Liriodendron Tulipifera* neglected in plant press, Sept. 1, 1894 (*Nuttall*, 1681).

ASTERINA Lev.

A. Leemingii E. & E.

On *Galax aphylla*, May 4, 1894 (*Nuttall*, 1493, 475).

DIMEROSPORIUM Fckl.

D. Galactis E. & E.

On leaves of *Galax aphylla* in conjunction with the last species above, May 4, 1894 (*Nuttall*, 1576, 475).

D. Collinsii (Schw.) Thum.

On leaves *Amalanchier Canadensis*, Glade Creek, May 4, 1894 (*Nuttall*, 1490, 472).

SCORIAS Fries.

S. spongiosa (Schw.) Fr.

On living *Fagus atropunicea*, at Rupert's July 26, 1894. Spores 16 to 18 x 5 μ (*Nuttall*, 1634).

SPHÆRIACEÆ.

VALSA Fries.

V. ceratophora Tul.

On fire killed *Hicoria minima*, Oct. 17, 1894. On *Acer saccharinum*, L. Asci 38 x 5 μ, spores 7.5 to 10 x 1.5 to 1.75 μ (*Nuttall*, 1711).

V. Diospyri E. & E. Proc. Phil., Acad., 340 (1894).

TYPE HABITAT: On dead limbs *Diospyros Virginiana*, Dec. 10, 1893 (*Nuttall*, discov. 1308, 253).

Stroma consisting of the slightly blackened substance of the bark, convex, about 2 mm. diameter, not circumscribed. Perithecia 4 to 10 in a stroma, subglobose, .25 to .33 mm. diameter, necks converging and united above in a small, black disk which perforates the pustuliform-elevated epidermis, but does not rise above it. Ostiola short, conic-cylindrical, with a smooth, round opening crowded and finally obliterating the disk. Asci clavate-lanceolate, p. sp. 25 x 5 μ, 8-spored, paraphysate. Sporidia allantoid, hyaline, 8 to 10 x 1.5 to 2 μ. Spermogonia (Cytispora), stroma multilocular gray inside, opening by a single, central pore. Spermatia allantoid, hyalins, moderately curved, 4 to 5 x 1.25 μ.

V. etherialis E. & E. Proc. Phila. Acad., 341 (1894).

TYPE HABITAT: On dead limbs of *Acer rubrum*, Feb. 1894 (*Nuttall*, discov. 1304, 373).

Stromata cortical, thickly scattered, convex 1 to 1.5 mm. diameter. Perithecia 6 to 12 together, circinate, buried in the unaltered substance of the bark, small, 150 to 250 μ diameter their short necks terminating in an erumpent, compact fascicle of obtuse, black, slightly umbilicate ostiola closely embraced by the epidermis and scarcely rising above it. Asci (p. sp.) fusoid, 15 to 22 x 4 to 4.5 μ, stipitate, 8-spored. Sporidia biseriate, allantoid, hyaline, curved, slender, 5 to 6 x about 1 μ. When well developed, the epider-

mis is raised into subdiscoid pustules in which the slight protuberances indicate the position of the subjacent perithecia.

V. delicatula C. & E. has fewer, larger perithecia and broader sporidia. *V. miscrospora* Cke. & Plowr. has also larger perithecia and yellowish sporidia, and the ostiola are more or less distinctly sulcate, indicating its close relationship to *Eutypella*. In *V. etherialis* the sporidia both in and out of the asci are perfectly hyaline.

V. coronata (Hoffm.) Fr.

On young, fire-killed *Castanea dentata*, Nov. 14, 1893 (*Nuttall*, 1263, 209).

V. albopuncta E. & E., sp. nov.

TYPE HABITAT: On dead limbs *Liriodendron Tulipifera*, Oct., 1894 (*Nuttall*, discov. 1712, 600).

Stromata minute (.5 to 7.5 mm.), subseriate, included in the thick epidermis and not penetrating the inner bark, white throughout, and without any distinct circumscribing line. Perithecia 3 to 6 in a stroma, pale slate-color, 110 to 130 μ diameter; necks very slender, terminating in minute, subglobose, slate-colored ostiola tardily erumpent around the margin of the minute, snow-white, pulverulent disk. Asci clavate-cylindrical, 50 x 6 μ, short-stipitate, obtuse above, paraphysate? Sporidia biseriate, allantoid, hyaline, moderately curved, 6 to 9 x 1.5 to 2 μ.

A beautiful species. The lines of snow-white disks, which barely perforate the ruptured epidermis and are closely surrounded by its torn and slightly raised margin, present a very neat appearance.

V. Abietis Fr.

On *Tsuga Canadensis* Short Creek, alt. 1,100 ft., Feb. 2, 1893 (*Nuttall*, 1349).

V. Vitis (Schw.) Fckl.

On *Vitis* sp., March 26, 1894 (*Nuttall*, 1432).

V. præstans B. & C.

On dead twigs *Nyssa aquatica*, Nov. 14, 1893 (*Nuttall*, 1247). Spores 10 to 12 x 3 to 4 μ.

V. Nyssæ Cooke.

On fire killed *Nyssa aquatica*, Nov. 14, 1893 (*Nuttall*, 1689).

V. subclypeata C. & Peck.

On young fire killed *Sassafras Sassafras*, Nov. 14, 1893 (*Nuttall*, 1262, 209).

V. ambiens (Pers.) Fr.

On *Asimina triloba*, *Cornus florida* and *Aralia spinosa*, Feb. 18, 1894 (*Nuttall*, 1383).

V. Chionanthi E. & E., Proc., Phila. Acad., 340 (1894).

TYPE HABITAT: On dead limbs of *Chionanthus Virginica*, March, 1894 (*Nuttall*, discov. 1456, 228).

Perithecia 4 to 10, globose, .25 to .33 mm. diameter, buried in the unchanged substance of the bark, with convergent necks, terminating in short-cylindrical, obtuse, perforated ostiola erumpent in a close fascicle perforating and slightly raising the bark. Asci clavate, p. sp. 40 to 45 x 8 to 10 μ, 8-spored, paraphysate? Sporidia allantoid, hyaline, 12 to 15 x 3.5 to 4.5 μ, biseriate above.

Spermogonia (*Cytispora Chionanthi* E. & E.) buried in the bark flask-shaped, .5 to .75 μ diameter, multilocular, the cells soon confluent, the apex erumpent and perforated by a single pore. Sporules allantoid, 4 to 6 x 1 to 1.25 μ, borne on basidia branched above, the branches erect, straight, nucleate, 7 to 10 μ long.

V. pauperata C. & E.
On *Acer rubrum*, March 26, 1894 (*Nuttall*, 1444, 423).

V. leucostoma (Pers.) Fr.
On peach tree, Dec. 2, 1894 (*Nuttall*, 1768).

V. Linderæ Peck.
On *Benzoin Benzoin*, April 11, 1895 (*Nuttall*, 1796).

EUTYPELLA Nits.

E. densissima E. & E., Proc. Phila. Acad., 341 (1894).
TYPE HABITAT: On dead limbs *Aralia spinosa*, Feb., 1894 (*Nuttall*, 363).

Stromata scattered, cortical, depressed-conical, 2 to 3 mm. diameter, not circumscribed, but staining the bark olive-gray. Perithecia numerous, often 50 to 70 in a stroma, 100 to 120 μ diameter, closely packed, their slender necks terminating in obtusely conical, 4 cleft, black, densely crowded ostiola erumpent in a brown disk surrounded by the ruptured epidermis. The disk is soon obliterated, so that only the crowded, black, subshining ostiola are seen. Asci clavate-fusoid, p. sp. 25 to 30 x 4 μ. Sporidia biseriate, allantoid, hyaline, moderately curved, 8 to 10 x 1.5 to 2 μ.

E. rugiella (C. & E.) Sacc.
On *Acer rubrum*, May 4, 1893 (*Nuttall*, 921).

E. stellulata (Fr.) Sacc.
On *Robinia Pseudacacia*, March 29, 1893 (*Nuttall*, 33).

E. Platani Sz.
On *Platanus occidentalis* in drift. Spores 7.5 to 8 x 1.5 to 2 μ. Oct. 21, 1895 (*Nuttall*, 1885).

EUTYPA Tul.

E. spinosa (Pers.) Tul.
On dry dead logs, June 29, 1893 (*Nuttall*, 1105).

E. milliaria (Fr.) Sacc.
On river drift wood, April 20, 1894. Asci 150 x 6 μ spores 10 x 2 μ (*Nuttall*, 1477).

DIATRYPE Fr.

D. Stigma (Hoffm.) Fr.
On *Castanea dentata*, April 15, 1895 (*Nuttall*, 1799).

D. platystoma (Schw.) Berk.
On *Magnolia Fraseri*, Feb. 8, 1894 (*Nuttall*, 1380, 342).

DIATRYPELLA C. & DeNot.

D. verruciformis (Ehrh.) Nits.
On *Alnus rugosa*, Nov. 20, 1893 (*Nuttall*, 1258).

ROSELLINIA DeNot.

R. aquila (Fr.) De Not.
On dead limbs, March 21, 1893 (*Nuttall*, 919, 19).

R. corticium (Schw.) Sacc.
On dead oak, alt. 1,800 ft., Short Creek. Spores 25 to 30 x 10 to 12.5 μ. Dec. 16, 1893 (*Nuttall*, 1310).

R. subiculata (Schw.) Sacc.
On dead dry *Robinia Pseudacacia*, July 15, 1893. Perithecia clustered or connate, each 3 to 5 μ, black, ostiola papillate. Spores 9 to 12.5 x 5 to 6 μ somewhat inequilateral, elliptical, colored. (*Nuttall*, 1129).

R. pulveracea (Ehrh.) Fckl.
On dead wood; Nov. 1893. Spores 10 to 15 x 7 to 9 μ (*Nuttall*, 1338).

R. millegrana (Schw.) Sacc.
On dead *Platanus occidentalis*, Aug. 2, 1893 (*Nuttall*, 1161).

R. abietina trichota C. & Ell.
On *Pinus Virginiana*, Jan. 7, 1895 (*Nuttall*, 1784, 675).

BOMBARDIA Fr.

B. fasciculata Fr.
On wet dead limb, *Magnolia Fraseri*, on ground, Sep. 16, 1895 *Nuttall*, 1830).

ANTHOSTOMA Nits.

A. micrœcium E. & E., Proc. Phila. Acad., 344 (1894).
TYPE HABITAT: On dead limbs *Asimina triloba*, Feb. 12, 1894 (*Nuttall*, discov. 1377).
Stroma cortical, faintly circumscribed, 1 to 1.5 mm. diameter, orbicular, convex. Perithecia 4 to 8 in a stroma, globose, minute (200 to 250 μ), circinate, necks slender, short, converging, with the minute papilliform ostiola erumpent in a small, black, hemispherical disk, which barely pierces the pustuliform-elevated epidermis, and is closely embraced by it. Asci cylindrical, 80 to 110 x 8 to 10 μ, paraphysate 8-spored. Sporidia uniseriate, elliptical, brown, continuous, 2-nucleate, 12 to 14 x 6 to 7 μ.
Distinguished by its very small stroma and perithecia.

A. microplacum (B. & C.) Sacc.
On *Sassafras Sassafras*, alt. 1,800 ft., March 21, 1893 (*Nuttall*, 915).

XYLARIA Hill.

X. polymorpha (Pers.) Grev.
On dead logs, April 7, 1893 (*Nuttall*, 890).

X. corniformis Fr.
On rotten limb, Sept. 9, 1893. On *Magnolia Fraseri*, Nov. 1895 (*Nuttall*, 1194).

X. Hypoxylon (Linn.) Grev.
On dead log, March 10, 1893 (*Nuttall*, 807).

X. flabelliformis (Schw.) B. & C.
On *Carpinus Caroliniana*, May 13, 1893 (*Nuttall*, 957).

X. Cornu-Damæ (Schw.) Berk.
On wet rotten log, alt. 2,000 ft., Aug. 24, 1893. Spores 20 to 21 x 4.5 μ (*Nuttall*, 1179).

USTULINA Tul.

U. vulgaris Tul.
On dead and rotting stumps, March 8, 1893 (*Nuttall*, 954).

HYPOXYLON Bull.

H. atroviride E. & E., Proc. Phila. Acad., 346 (1894).
TYPE HABITAT: On bark of dead tree, *Betula* or *Quercus*, Dec., 1893 (*Nuttall*, discov. 1320, 275).
Stroma pulvinate, 1 to 1.5 cm. across, and about 4 mm. thick, orbicular, covered above with a thin (.5 mm.) carbonaceous crust, which is soon covered by a dark green layer of the ejected spores, laterally and internally dirty-umber color. Perithecia (which constitute the entire inner substance of the stroma) ovate compressed, and including the long, stout neck, about 3 mm. long and 1 mm. broad below. Ostiola papilliform, soon covered and obscured by the ejected sporidia. Asci cylindrical 100 x 3.5 to 4 μ (p. sp. 40 to 45 long), paraphysate, 8-spored. Sporidia uniseriate, oblong-elliptical, pale brown under the microscope, 2-nucleate, 4.5 to 5.5 x 2 μ.
This is a well-marked species. The substance of the stroma, except the superficial carbonaceous layer, is friable, and in this respect as well as the color resembles *H. Petersii* B. & C., from which, however, in other respects it is very distinct.

H. coccineum Bull.
On *Aralia spinosa*, alt. 1,300 ft., Aug. 18, 1893 (*Nuttall*, 1173, 140).

H. Nuttallii E. & E., Proc. Phila. Acad., 346 (1894).
TYPE HABITAT: On bark of dead *Magnolia Fraseri* at Glade Creek, May 1894 (*Nuttall*, discov. 1494, 477).

Stromata gregarious, subconfluent, depressed-hemispherical or strongly convex, 3 to 6 mm. diameter, purplish-black, mammillose. Perithecia small (about .25 mm.) scattered irregularly through the stroma, which is rather soft and brownish within. Ostiola crowning the mammillose projections on the surface of the stroma, papilliform, soon deciduous, leaving a round perforation. The asci in the spec. examined had disappeared. Sporidia brown, oblong-elliptical, sub-inequilateral, 7 to 8 x 3 to 4 μ (exceptionally 9 x 5 μ).

H. Howeianum Peck.
On decorticated *Magnolia Fraseri*, alt. 1,800 ft., Sept. 12, 1893 (*Nuttall*, 1203, 158).

H. FUSCUM (Pers.) Fr.
On dead and decorticated *Acer saccharum*, Grant Co., near Bayard (*Millspaugh*). On dead *Alnus rugosa*, Oct. 31, 1893. Spores 12 x 6 to 7 μ (*Nuttall*, 1221).

H. multiforme Fr.
On dead *Betula* sp., alt. 1,800 ft., Short Creek, Aug. 11, 1893 (*Nuttall*, 1147).

H. perforatum (Schw.) Fr.
On dead twig, Feb. 3, 1894. On *Ilex opaca*, Dec. 28, 1894 (*Nuttall*, 1351). Spores 10 x 5 μ. On *Magnolia Fraseri*, Nov. 1895.

H. rubiginosum (Pers.) Fr.
On dead hard wood of *Robinia Pseudacacia*, Feb. 25, 1893 (*Nuttall*, 949, 39).

H. Sassafras (Schw.) Berk.
On *Sassafras Sassafras*, March 21, 1893. Spores 8 to 12 x 3 to 4 μ (*Nuttall*, 917).

H. stigmateum Cooke
On living *Quercus* sp., originating under the outer bark which it pushes off, or at times remains attached at one edge and stands away like a lid. Asci, total length, 150 x 10 μ, fertile portion 120 x 10 μ, spores black, elliptical, 16 to 20 x 6 to 10 μ. Feb. 2, 1894 (*Nuttall*, 1350).

H. colliculosum (Schw.) Nits.
On *Rhododendron maximum*, alt. 1,800 ft., Short Creek, Dec. 16, 1893 (*Nuttall*, 1330, 289).

DALDINIA DeNot.

D. concentrica (Bolt.) C. & DeN.
On bark of dying *Acer* sp., April 15, 1893 (*Nuttall*, 905).

D. vernicosa (Schw.) C. & DeN.
On dead trees, March, 1895 (*Nuttall*, 1790).

NUMMULARIA Tul.

N. punctulata (B. & Rav.) Sacc.
On dead branch of *Quercus* sp., Aug. 16, 1893 (*Nuttall*, 1151).

GNOMONIELLA Sacc.

G. Coryli (Batsch.) Sacc.
On *Corylus Americana* at Rupert's, Aug. 5, 1894 (*Nuttall*, 1647).

PHYSALOSPORA Niessl.

P. Ilicis (Schl.) Sacc.
On dead leaves of *Ilex opaca*, July 21, 1894. Asci 7.5 to 10 μ (*Nuttall*, 1616).

TRICHOSPHÆRIA Fckl.

T. pulchriseta Peck.
On dry firm splinters of dead log, alt. 1,800 ft., Short Creek, March 6, 1894 (*Nuttall*, 1412, 382).

BOTRYOSPHÆRIA Ces. & DeNot.

B. Quercuum (Schw.) Sacc.
On *Quercus* sp., *Vitis* sp., *Pinus Virginiana*, *Opulaster opulifolius*, and *Parthenocissus quinquefolia*. Perithecia 2 to 10 (*Nuttall*, 925, 14).

B. Quercuum ——— var.
On cultivated *Rubus*, Feb. 25, 1895 (*Nuttall*, 1794, 685).

B. Araliæ Curtis.
On *Aralia spinosa*, Feb. 24, 1894. Spores 20 to 30 x 8 to 10 μ (*Nuttall*, 1395).

B. pyriospora (Ellis) Sacc.
On *Chionanthus Virginica*, March 28, 1894. Asci, fertile portion, 75 x 15 μ (*Nuttall*, 1438).

B. Hibisci ——— forma.
On *Celastrus scandens*, April 27, 1895 (*Nuttall*, 1819, 707). Spores 26 to 35 x 6 to 7.5 μ.

CRYPTOSPORELLA Sacc.

C. compta (Tul.) Sacc.
On dead limbs of *Fagus atropunicea*, Nov. 17, 1893. Asci, fertile portion, 100 x 12.5 to 15 μ, spores granular 22 x 10 μ (*Nuttall*, 1256).

SPHÆRELLA Ces. & DeNot.

S. maculiformis (Pers.) Awd.
On leaves of *Castanea dentata* on ground, Dec. 13, 1893 (*Nuttall*, 1314).

S. conicola Sacc.

On dead cones of *Tsuga Canadensis*, Dec. 16, 1893. Spores 10 x 3 μ (*Nuttall*, 1311).

S. Gaultheriæ C. & P.

On *Gaultheria procumbens*, June 8, 1894 (*Nuttall*, 1534).

S. nyssæcola Cooke?

On *Nysa aquatica*, Oct. 10, 1894 (immature) (*Nuttall*, 1719, 607).

DIDYMELLA Sacc.

D. Physocarpi E & E., Proc. Phila. Acad., 1894, 335.

TYPE HABITAT: On *Opulaster opulifolius*, May 12, 1894 (*Nuttall*, 1507, 488).

Perithecia gregarious, covered by the pustuliform epidermis, about .25 mm. diameter, white inside, depressed-globose, the papilliform ostiolum barely penetrating the epidermis. Asci clavate-cylindrical, short-stipitate, 85 to 90 x 10 to 12 μ, paraphysate, 8-spored. Sporidia biseriate, fusoid, 4-nucleate, uniseptate, constricted at the septum, hyaline, 19 to 22 x 4 to 5 μ, mostly a little curved.

MELANCONIS Tul.

M. modonia Tul.

On *Castanea dentata*, Nov. 14, 1893 (*Nuttall*, 1274, 221).

HERCOSPORA Tul.

H. Tiliæ (Fr.) Tul.

On *Tilia heterophylla*, Feb. 16, 1894. Spores 18 x 7.5 μ (*Nuttall*, 1834, 346).

DIAPORTHE Nits.

D. Gladioli E. & E. ?

On *Caulophyllum thalictroides*, July 8, 1894. Asci 38 x 5 to 7 μ, spores septate, 4-nucleate, about 10 x 3 μ (*Nuttall*, 1603, 553).

D. Araliæ E. & E., Proc. Phila. Acad., 339 (1894).

TYPE HABITAT: On *Aralia spinosa*, Feb. 2, 1894 (*Nuttall*, discov. 1356, 312).

Stroma buried in the wood and circumscribed by a penetrating, black line, elliptical, about 5 x 4 mm. Perithecia buried in the stroma, few (6 to 10) globose, .5 to .75 mm. diameter, their short-cylindrical ostiola projecting from a black, tubercular disk seated on the surface of the wood and perforating the pustuliform-elevated epidermis, but scarcely rising above it. Asci clavate-cylindical, 40 to 45 x 5 to 6 μ, paraphysate, 8-spored. Sporidia biseriate, oblong, 4-nucleate, becoming uniseptate and slightly constricted, hyaline, obtuse, 12 to 13 x 2.5 to 3 μ.

Allied to and resembling *D. ocularia* C. & E.

D. CHOROSTATE **Halesiæ** E. & E., Proc. Phila. Acad., 339 (1894).

TYPE HABITAT: On dead limbs of *Mohrodendron Carolinum*, May, 1894 (*Nuttall*, discov. 1541).

Perithecia 4 to 8, loosely circinate. .75 mm. horn-color inside, becoming nearly black, sunk in the wood, necks converging with their obtuse, smooth, hemispherical ostiola erumpent in a close fascicle, closely surrounded by the ruptured epidermis. Asci slender, 55 to 60 x 6 to 7 μ, short-stipitate. Sporidia subbiseriate, fusoid-oblong, hyaline, 2 to 4-nucleate, becoming uniseptate and slightly constricted, straight, 12 to 15 x 2.5 to 3 μ.

There is no distinct circumscribing line around the stroma, but the inner surface of the bark is uniformly blackened.

D. CHOROSTATE **Tetrapteræ** E.& E., Proc. Phila. Acad., 339 (1894).

TYPE HABITAT: On dead limbs *Mohrodendron Carolinum*, May, 1894 (*Nuttall*, discov. 1542).

Stroma cortical, 1.5 to 2 mm. diameter, surrounded by a black line which does not penetrate the wood. Perithecia 4 to 12, circinate, 5 mm. diameter, sunk to the wood and leaving their impress on its surface but not penetrating it. Ostiola obtusely rounded and perforated, erumpent in a compact fascicle and closely surrounded by the ruptured epidermis. Asci clavate-cylindrical, 75 to 80 x 12 μ. Sporidia biseriate, oblong-fusoid, slightly curved, subobtuse, hyaline, uniseptate and constricted at the septum, each cell with a large nucleus, 9 to 22 x 5 to 7 μ.

Differs from *D. Halesiæ* E. & E., in its smaller perithecia, not sunk in the wood, and its much larger sporidia.

D. CHOROSTATE **Aceris** Fckl.

On *Acer saccharinum*, L., Jan. 26, 1894 (*Nuttall*, 1739).

D. Hydrangeæ E. & E., sp. nov.

TYPE HABITAT: On dead stems *Hydrangea arborescens*, Nov. 1894 (*Nuttall*, discov. 1756, 641).

Perithecia scattered, ovate-globose, 350 to 380 μ diameter, sunk in the wood, which is not at all discolored. Ostiola stout, erumpent, short-cylindrical, or conic-cylindrical, the apex papilliform. Asci (p. sp.) oblong-cylindrical, 50 to 60 x 8 μ, 8-spored, obscurely paraphysate. Sporidia biseriate, oblong elliptical, hyaline, uniseptate, slightly constricted, 12 to 15 x 3 to 4 μ, ends subacute.

This may be the *Sphæria* spoken of by Schweinitz as found by him on limbs of *Hydrangea*, in company with his *Sphæria* (*Teichospora*) *Hydrangeæ*.

D. CHOROSTATE **cercophora** (Ellis.) Sacc.

On *Ilex opaca* Dec. 23, 1893, March 15, 1894 (*Nuttall*, 1333).

D. CHOROSTATE **oncostoma** (Du B.) Fckl.

On *Robinia Pseudacacia*, April 7, 1894. Spores 17 to 19 x 4 to 5 μ (*Nuttall*, 1446).

D. CHOROSTATE **sociata** (C. & E.) Sacc.

On *Benzoin Benzoin*, April 13, 1895. Helminthospores 75 to 100 x 15 μ. 7-septate (*Nuttall*, 1798).

D. CHOROSTATE **obscura** (Peck) Sacc.

On *Rubus villosus*, Feb. 13, 1893 (*Nuttall*, 1313, 260).

D. EUPORTHE **aculeata** (Schw.) Sacc.
On *Phytolacca decandra*, Nov. 14, 1894. Asci 40 to 55 x 6 to 7.5 μ. Spores 12.5 to 18 x 3 to 3.5 μ (*Nuttall*, 1754, 639).

D. TETRASTAGA **rostellata** (Fr.) Nits.
On *Rubus odoratus*, May 31, 1894 (*Nuttall*, 1528, 560).

AMPHISPHÆRIA Ces. & DeNot.

A. pinicola Rehm.
On *Pinus rigida* at Glade Creek, and on *Pinus Virginiana*, May 4, 1894. Spores very variable + 35 x 12 μ (*Nuttall*, 1499, 480).

VALSARIA Ces. & DeNot.

V. exasperans (Ger.) Sacc.
On *Juglans cinerea*, Nov. 3, 1893 (*Nuttall*, 1260, 202).

MASSARIA DeNot.

M. Magnoliæ E. & E., sp. nov.
TYPE HABITAT: On bark of dead limbs *Magnolia acuminata*, April 25, 1895 (*Nuttall*, discov. 1818, 700, 705).
Perithecia scattered, buried in the bark, depressed-globose, .75 to 1.25 mm. diameter, the subconical ostiolum piercing but not perceptibly raising the bark. Asci broad oblong, p. sp. 150 to 200 x 55 to 65 μ with a very short, nodular stipe, 8-spored, paraphysate. Sporidia crowded-biseriate, oblong or clavate-oblong, 3 to 5-septate, mostly 3-septate, when young, hyaline at first, finally deep brown and then with only one distinct septum, though often 1 to 4 other faint septa can be seen. There is a distinct constriction at the main septum, which is a little below the middle of the spore, but none at the other faint septa which are often wanting. The sporidia measure 65 to 80 x 20 to 25 μ, larger than in *M. fœdans* (Tode), which has sporidia about 50 x 20 μ, 3-septate and constricted at all the septa, besides being more distinctly narrowed below.

LEPTOSPHÆRIA (Pers.) DeNot.

L. Doliolum (Pers.) DeNot.
On *Polymnia Uvedalia* and *Helianthus decapetalus*, Nov. 16, 1894. Perithecia covered by outer bark. Asci, fertile part 110 x 6 μ, stipitate, spores overlapping at ends. Spores 22 x 4 μ, 23 x 4.5 μ, 25 x 5 μ, 27 x 5 μ, 30 x 5 μ; 3-septate, nucleate, constricted at septum when mature; straight, one-sided, or curved (*Nuttall*, 1744).

L. vagabunda Sacc.
On dead stems *Hydrangea arborescens*, Nov. 21, 1894. Asci 125 to 150 x 7.5 μ total length (*Nuttall*, 1745).

L. ogilviensis (B. & Br.) Ces. & DeNot.
On *Cimicifuga racemosa*, July 4, 1894 (*Nuttall*, 1586).

L. clavigera (C. & E.) Sacc.
On old stems *Phytolacca decandra*, Nov. 14, 1894 (*Nuttall*, 1741). Spores + 43 x 6 μ.

L. orthogramma (B. & C.)
On *Zea Mays*, Aug. 10, 1895 (*Nuttall*, 1832, 722).

MELANOMMA Nits & Fckl.

M. Pulvis-pyrius (Pers.) Fckl.
On decorticated *Magnolia Fraseri*, alt. 1,800 ft., Short Creek, Sept. 10, 1893. Spores 15 x 3.5 μ (*Nuttall*, 1200).

TREMATOSPHÆRIA Fckl.

T. vitigena E. & E., sp. nov.
TYPE HABITAT: On old, decaying wood of *Vitis rupestris*, April, 1894 (*Nuttall*, discov. 454).
Perithecia gregarious, sunk in the wood all except the obtuse, convex apex, .5 to .75 mm. diameter, depressed-globose, the buried part rather thin-walled, the erumpent, convex apex thick, solid, like the stromatic shield of *Clypeosphæria*. Ostiolum papilliform, soon perforated. Asci clavate-cylindrical, paraphysate, 8 spored, 86 to 100 x 10 to 12 μ. Sporidia sub-biseriate, fusoid-oblong, 3-septate, and constricted, subacute, pale-brown, 20 to 25 x 6 to 7 μ.

PSEUDOVALSA Ces. & DeNot.

P. sigmoidea (C. & E.)
On dead limbs *Quercus Prinus*. Spores 50 to 88 x 5 to 7 μ (*Nuttall*, 1828, 717).

LASIOSPHÆRIA Ces. & DeNot.

L. ovina (Pers.) Ces. & DeNot.
On *Juglans cinerea*, and parasitic on *Hypoxylon*, Short Creek, alt. 1,800 ft., Dec. 16, 1893. Spores 50 to 60 x 6 to 7.5 μ. Asci 135 x 12.5 μ (*Nuttall*, 1322).

ACANTHOSTIGMA DeNot.

A. decastylum (Cooke) Sacc.
On dead log, June 18, 1893 (*Nuttall*, 1018).

HERPOTRICHIA Fckl.

H. diffusa (Schw.)
On dead twig, Sept. 10, 1893 (*Nuttall*, 1197).

CALOSPORA Sacc.

C. aculeans (Schw.) Sacc.
On *Rhus hirta* and *copallina*, March 29, 1894. Spores 15 to 17 x 3 μ, aculeate (*Nuttall*, 1440).

C. Rhoina (C. & Ell.) Sacc.
On *Rhus hirta*, Dec. 9, 1893. Spores 15 to 18 x 5? μ hyaline, 4-nucleate, uniseptate constricted at septum. (*Nuttall*, 1348, 306).

PYRENOPHORA Fr.

P. calvescens (Fr.) Sacc.?
On *Chenopodium anthelminticum*, Aug. 10, 1895 (*Nuttall* 1845, 736).

TEICHOSPORA Fckl.

T. nitida E. & E.
On *Rubus villosus*, Apr. 25, 1895. Asci 75 x 12? μ. Spores 20 to 23 x 9 to 10 μ (*Nuttall*, 1817, 706).

PLEOSPHÆRIA Speg.

P. corticola E. & E., Proc. Phila. Acad., 1894, 332.
TYPE HABITAT: On bark of *Pinus rigida*, Glade Creek, June 24, 1894 (*Nuttall*, discov. 1582).
Perithecia scattered, superficial, ovate, 300 to 400 μ diameter, carbonaceo-membranaceous, pilose-strigose, hairs 100 to 200 x 5 to 6 μ, soon opaque, very faintly and sparingly septate, here and there collected into closely compacted fascicles resembling stout bristles. Ostiolum papilliform, obtuse. Asci oblong-cylindrical, abruptly short-stipitate, 80 to 100 x 20 to 25 μ. Paraphysate? Sporidia crowded, acutely elliptical, nearly hyaline at first, becoming olive-brown and 5 to 7 septate and muriform, but not constricted.
Comes near *P. strigosa* Sacc., but perithecia rather smaller, not depressed, and hairs fasciculate.

P. ———— sp.
On *Tecoma radicans*, Feb. 20, 1894 (*Nuttall*, 1414, 385).

CUCURBITARIA Gray.

C. Fraxini E. & E.
On *Fraxinus Americana*, Apr. 27, 1894 (*Nuttall*, 1523).

C. elongata (Fr.) Grev.
On *Robinia Pseudacacia*, Jan. 15, 1894 (*Nuttall*, 1783).

OPHIOBOLUS Riess.

O. porphyrogonus (Tode) Sacc.
On *Vernonia Noveboracensis*, Apr. 24, 1895 (*Nuttall*, 1820, 702).

O. acuminatus (Sow.)
On *Zea Mays*, Aug. 10, 1895 (*Nuttall*, 1839, 728).

O. fulgidus (C. & P.) Sacc.
On *Vernonia Noveboracensis*, Apr. 24, 1895 (*Nuttall*, 1821, 703).

CRYPTOSPORA Tul.

C. femoralis (Peck) Sacc.

On *Alnus rugosa*, Feb. 25, 1894. Asci 60 to 75 x 12.5 to 15 μ. Spores 50 to 65 x 3.5 μ in middle and enlarging to 5 μ at each end (*Nuttall*, 1318).

C. cinctula (C & P) Sacc?

On *Castanea dentata*, Dec. 8, 1893. Asci about 75 x 7.5 μ. Spores 60 to 75 x 4 μ, hyaline, nucleate, curved, often slightly thickened toward one end (*Nuttall*, 1296, 245).

C. trichospora (C. & P.) Sacc?

On *Quercus sp.*, Feb. 1894. Spores+50? μ (*Nuttall*, 1450).

HYPOCREACEÆ.

HYPOMYCES Fr.

H. rosellus (Alb. & Schw.) Tul?

On *Hymenocetum* on *Magnolia Fraseri*, March 6, 1894 (*Nuttall*, 1417, 387).

H. aurantius (Pers.) Fckl.

On *Stereum* sp. Sept. 3, 1893 (*Nuttall*, 1198). Short Creek, alt. 1,800 ft.

NECTRIA Fr.

N. cinnabarina (Tode) Fr.

On *Aralia spinosa*, March 5, 1894. Asci 75 x 7.5 μ. Spores 20 to 23 x 4 to 5 μ (*Nuttall*, 1405, 374).

N. coccinea (Pers.) Fr?

On bark of dead *Magnolia Fraseri*, March 1894. Asci 65 x 7.5 μ. Spores 10 to 15 x 3.5 to 6 μ (*Nuttall*, 1472, 451).

N. ditissima Tul.

On dead and fallen *Robinia Pseudacacia*, on *Magnolia Fraseri*, Oct. 17, 1893 (*Nuttall*, 1115, 162).

N. vulpina, Cke.

On bark of dead *Ulmus pubescens*? Oct. 17, 1894. Spores 10 x 5 μ, 1-septate, 2-guttulate (*Nuttall*, 1216, 164).

N. episphæria (Tod.) Fr.

On dead fallen twigs, Aug. 15, 1893 (*Nuttall* 1175, 143).

APONECTRIA Sacc.

A. inaurata (B. & Br.) Sacc.

On *Rhus copallina*, Mar. 24, 1894 (*Nuttall*, 1431). Microspores 3 x 1 μ. Spores 10 to 12.5 x 3 μ.

HYPOCREA Fr.

H. Virginiensis E. & E. Proc. Phila. Acad., 442 (1893).

TYPE HABITAT: On leaves of *Rhododendron maximum*, Aug. 12, 1893 (*Nuttall*, discov. 1163).

Epiphyllous, stroma carnose, scattered, sub-hemispherical or depressed-turbinate, 1 to 2 mm. diameter, of a yellowish gray color, subtruncate above and obscurely margined (when mature). Perithecia buried in the stroma, ovate, membranaceous, 110 to 150 μ diameter. Ostiola hemispherical, prominent, black, broadly perforated and sometimes collapsed. Asci clavate-cylindrical, p. sp. 40 to 45 x 7 to 8 μ, short-stipitate, filiform-paraphysate, 8-spored. Sporidia biseriate, oblong-fusoid, yellowish-hyaline, uniseptate, slightly constricted at the septum, obtusely pointed at the ends, 10 to 12 x 3 to 3.5 μ.

H. viridans B. & C. seems to differ in its hidden ostiola (ostiolis latitantibus).

H. tenerrima E. & E., Proc. Phila. Acad., 442 (1893).

TYPE HABITAT: Incrusting moss, leaves, twigs, living *Gaultheria procumbens*, etc. July 1893 (*Nuttall*, discov. 1138, 123).

Perithecia gregarious, minute (.16 mm.), clothed (except the black apex) with a thin white tomentum, seated on a thin snow-white, tomentose-arachnoid subiculum. Asci cylindrical, 40 x 3 μ, without paraphyses, 8-spored. Sporidia uniseriate, oblong, obtuse, hyaline, 5 to 6 x 2 μ, with a single nucleus in the centre (becoming uniseptate)?

This is closely allied to *H. subcarnea* E. & E., but differs in the color of the subiculum, the black apex of the perithecia, the narrower asci, and rather longer sporidia.

HYPOCREOPSIS Karst.

H. riccoidea (Bolt.) Karst.

On *Kalmia latifolia*, alt. 2,000 ft., Aug. 24, 1893. Spores apparently moniliform (*Nuttall*, 1178).

GIBBERELLA Sacc.

G. **Saubinetii** (Mont.) Sacc.

On *Asparagus officinalis*, Nov. 1, 1893 (*Nuttall*, 1243, 190).

BROOMELLA Sacc.

B. **Ravenelii** (Berk.) Sacc.

On *Acer rubrum*, April 4, 1894 (*Nuttall*, 1461, 439).

PLEONECTRIA Sacc.

P. **Missouriensis** (E. & E.)

On dead stick, March 10, 1893 (*Nuttall*, 871).

CORDYCEPS Fries.

C. **militaris** (Linn.) Link.

In laurel thicket on ground, Aug. 12, 1893, Keeney's Creek (*Nuttall*, 1205, 161).

C. ophioglossoides (Ehrh.) Link.
On ground in wet woods, Aug. 24, 1893 (*Nuttall*, 1172).

DOTHIDEACEÆ.

PHYLLACHORA Nits.

P. GRAMINIS (Pers) Fckl.
On living leaves of *Hysterix Hysterix*, Fayette Co., near Nuttallburg (*Millspaugh*). On *Elymus Canadensis*, Oct. 28, 1893 (*Nuttall*, 1250, 192).

P. Caricis (Fr.) Sacc ?
On *Korycarpus diandrus*, March 1, 1894 (immature) (*Nuttall*, 1402, 238).

DOTHIDELLA Speg.

D. Ulmæ (Sz.) E. & E.
On *Ulmus pubescens*, Nov. 5, 1894 (*Nuttall*, 1749, 629).

PLOWRIGHTIA Sacc.

P. MORBOSA (Schw.) Sacc.
On limbs of cultivated Plum and Cherry, Monongalia Co., near Morgantown (*Millspaugh*).

MICROTHYRIACEÆ.

MYIOCOPORON Speg.

M. Smilacis (De Not) Sacc.
On *Smilax* sp. April 12, 1895 (*Nuttall*, 1807).

LOPHIOSTOMACEÆ.

LOPHIOTREMA Sacc.

L. Nucula (Fr.) Sacc.
On dead heartwood of *Liquidambar Styraciflua*, April 20, 1894 (*Nuttall*, 1479, 459).

LOPHIDIUM Sacc.

L. nitidum E. & E., Proc. Phila. Acad., 333 (1894).
TYPE HABITAT: On *Vitis* cult. Feb. 2, 1894 (*Nuttall*, discov. 1336, 295).
Perithecia scattered, semi-erumpent, small (200 to 250 μ diameter) black and shining, subhemispherical, the flattened base immersed in the bark. Ostiolum compressed, thin, narrow, sometimes obsolete. Asci cylindrical, short (8 to 10 μ), stipitate, about 100 x 10 to 12 μ, paraphysate, 8-spored. Sporidia uniseriate, oblong elliptical, yellow-brown, 5 to 7-septate with a longitudinal septum running through two or more cells, 19 to 22 x 8 to 10 μ, ends mostly rounded and obtuse, not at all or only slightly constricted in the middle.

L. compressum (Pers.) Sacc.
On *Salix nigra falcata*, April 23, 1894. Asci 70 to 100 x 15 μ, Spores 25 to 30 x 8 to 10 μ (*Nuttall*, 1481, 461).

HELVELLACEÆ.

MORCHELLA Dill.

M. esculenta (Linn.) Pers.
Along an old road among grasses and leaves under an oak, April 18, 1893 (*Nuttall*, 897).

M. angusticeps Peck.
On ground, Short Creek, April 18, 1893. Spores 25 to 28 x 15 μ (*Nuttall*, 895).

M. _____ sp.
On ground, Short Creek, 5 cm. high, with smooth spores 28 x 17 μ, April 18, 1893 (*Nuttall*, 896).

GYROMITRA Fr.

G. curtipes Fr.
On ground below cliffs, Short Creek. Asci, fertile part 50 x 16 to 18 μ. Total length 350 μ. Spores 22 to 30 x 10 μ, 2-nucleate (*Nuttall*, 1813).

HELVELLA Linn.

H. macropus (Pers.) Karst?
On ground in woods at base of cliffs, July 15, 1893 (*Nuttall*, 1097).

MITRULA Fr.

M. phalloides (Bull.) Chev.
In water on leaves of *Quercus Prinus*, etc., spores to 20 x 3 μ. Masterson's Glade, June 11, 1893 (*Nuttall*, 935).

M. lutescens B & C.
On ground and on dead logs in deep woods, alt. 2,000 ft. (*Nuttall*, 1024).

SPATHULARIA Pers.

S. clavata (Schæf.) Sacc?
In woods among dead leaves, stipe dark brown, spores *short* 25 μ, July 10, 1893 (*Nuttall*, 1087).

VIBRISSEA Fr.

V. truncorum (A. & S.) Fr.
On wet dead sticks, alt. 1,800 ft., June 15, 1893 (*Nuttall*, 991).

PEZIZACEÆ.

RHIZINA Fr.

R. inflata (Schæf.) Quél.

On sandstone rock in sandy loam. Blackish-brown, spreading, 2 to 9 cm. x 1 to 3 cm., convex, loosely attached to the soil by strong rootlets from all parts of the underside, margin strongly rolled inward. Asci 375? to 415 x 12.5 μ, spores hyaline, apiculate, large 40 x 10 μ. Keeney's Creek, Nov. 3, 1893 (*Nuttall*, 1224).

GEOPYXIS Pers.

G. nebulosa Cooke.

On dead wet wood at low and high altitudes, Aug. 10, 1893 (*Nuttall*, 1177).

G. carbonaria A. & S.

On ground upon which logs had been burned the previous autumn, April 18, 1893 (*Nuttall*, 908).

PEZIZA Dill.

P. aurantia Pers.

On wet and freshly crushed sandstone ballast, and on filling of sandstone cut on railroad. Spores curiously rough and apiculate at both ends. Nov. 3, 1893 (*Nuttall*, 1225).

P. badia Pers.

On ground, Short Creek, April 18, 1893 (*Nuttall*, 922).

OTIDEA Pers.

O. onotica ochracea Fr.

On ground and on rotten *Tsuga Canadensis*, July 14, 1893. Asci 175 x 10 μ total length, spores 11 to 13 x 7.5 μ, nuclei 2 (*Nuttall*, 1098).

HUMARIA Fr.

H. echinosperma Peck.

In soil of ditch, July 20, 1894 (*Nuttall*, 1630).

SARCOSCYPHA Fr.

S. coccinea Jacq.

On sticks, on ground in damp shady place, March 20, 1893 (*Nuttall*, 852).

S. floccosa Schw.

On a stick in a laurel thicket, alt. 2,000 ft., July 12, 1893 (*Nuttall*, 1112).

LACHNEA Fr.

L. SCUTELLATA, Linn.

On rotting log *Fagus atropunicea* and under bark of wet log *Quercus alba*, Monongalia Co., near Morgantown (*Millspaugh*). On rotten wood in old drift of mine, and on bare sandy ground among pebbles, Short Creek, May 11–17, 1893 (*Nuttall*, 936).

L. umbrarum Fr.
On open bare sandy soil, Short Creek, May, 1893 (*Nuttall*, 1107).

L. hirta Schum.
On floor of cave, July 25, 1893 (*Nuttall*, 1127).

L. vitellina Pers.
On dead log. Asci 235 x 15 μ, Short Creek, July 2, 1893 (*Nuttall*, 1114).

L. ERINACEUS, Schw.
On underside of log *Quercus alba*, Monongalia Co., near Morgantown (*Millspaugh*).

SCLEROTINIA Fuckel.

S. trifoliorum Eriks.
On ground in open woods, May 18, 1893 (*Nuttall*, 960).

HELOTIUM Fr.

H. lacteum E. & E., Proc. Phila. Acad., 145 (1893).
On bare log, Dec. 16, 1893. Pure white, stipitate, plane .4 to .6 mm. asci clavate 95 to 110 x 7.5 μ. Spores curved 16 to 25 x 3 to 4 μ, nuclei 4, paraphyses slender, Short Creek near the falls (*Nuttall*, 1318).

H. herbarum (Pers.) Fr.
On *Polymnia Uvedalia*, Nov. 15, 1894. Cups 6 to 12 mm. diameter, stipes 1 to 2 mm. long. Asci 55 to 75 x 7.5 to 10 μ. Spores 12 to 15 x 2.5 μ (*Nuttall*, 1755).

H. confluens Schw.
On dead logs, alt. 1,800 ft. Oct. 20, 1893 (*Nuttall*, 1213).

H. citrinum (Hedw.) Fr.
On wet dead log. Short Creek, alt. 1,800 ft. Sept. 12, 1893. (*Nuttall*, 1201).

H. castaneum Sacc.
On leaves of *Rhododendron maximum*. Short Creek, alt. 1,800 ft. Sept. 12, 1893 (*Nuttall*, 1206).

PHIALEA Fr.

P. virgultorum (Vahl.) Sacc.
On old grape twigs on wet ground. Asci 105 x 7.5 μ. Spores 18 x 4 μ. Nov. 1, 1894 (*Nuttall*, 1735).

PSEUDOHELOTIUM Fckl.

P. fibrisedum (B. & C.) Sacc.
On wet dead wood of *Juglans cinerea*, Dec. 5, 1894. More than 2 mm diameter, margin ciliate, red-maculate; asci oblong short-stipitate, total length 65 x 7.5 μ (*approx.*), paraphyses filiform. Spores hyaline 1-septate (?) oblong, straight or slightly curved, 12 to 18 x 3 μ (*Nuttall*, 1764).

CYATHICULA De Not.

C. quisquiliaris E. & E., Proc. Phila. Acad., 451 (1893).

TYPE HABITAT: On dead racemes of *Quercus Prinus*, on dead leaves, on rock in woods, April 2, 1893 (*Nuttall*, discov. 941).

Gregarious, sessile, 1 to 1.5 mm. diameter, cup-shaped, disk pale with a tinge of brick color when dry, dull, dirty-white and purpuraceo-squammulose outside, margin distinctly cleft-toothed and incurved when dry. Asci cylindrical, subsessile, 55 to 65 x 6 to 7 μ, with filiform paraphyses scarcely thickened above. Sporidia uniseriate, or sub-biseriate above, elliptical, hyaline, continuous, 6 to 8 x 3 to 4 μ.

CHLOROSPLENIUM Fr.

C. æruginosum (Œder) De N.

On loose core inside dead tree, Nov. 6, 1893. Disk more brilliant than margin in light and when young, in shadow varying to pure white. Asci over 105 x 7.5 μ total length, spores guttate 12.5 x 3 μ (Nuttall, 1235).

C. versiforme (Pers.) Karst.

On rotten mossy log, Short Creek, Oct. 28, 1893 (*Nuttall*, 1238).

C. Schweinitzii Fr.

Top of oak log, Dec. 10, 1893. Yellow in spring, green in autumn and winter (*Nuttall*, 1276).

MOLLISIA Fr.

M. Dehnii (Rabenh) Karst.

On *Potentilla Monspeliensis*, July 21, 1894 (*Nuttall*, 1618).

M. pinastri (C. & P.) Sacc.

On *Pinus Virginiana*, Dec. 3, 1894 (*Nuttall*, 1763).

M. CINEREA (Batsch.) Karst.

Peziza cinerea Batsch. On decayed log, Monongalia Co., near Morgantown (*Millspaugh*).

PYRENOPEZIZA Fuckel.

P. lacerata (C. & P.) Sacc.

On *Rubus odoratus*, May 31, 1894. Asci 45 to 50 x 5 to 6 μ. Spores 8 to 12.5 x 2 to 2.5 μ (*Nuttall*, 1529).

TAPESIA Pers.

T. sanguinea (Pers.) Fckl.

On dead log, and on *Magnolia Fraseri* and *Juglans cinerea*, June 10, 1894 (*Nuttall*, 1546).

T. fusca (Pers.) Fckl.

On rotten burned log *Tsuga Canadensis;* on dead rotting log *Juglans cinerea*, alt. 1,300 ft. Asci 45 to 92 x 495 μ. Spores 8 to 10 x 2 μ. Short Creek, Feb. 2, 1894 (*Nuttall*, 1365).

T. subiculata (Schw.) Sacc.

On wet sticks, June 15 and Oct. 25, 1893. Spores large, 10 x 3 μ (*Nuttall*, 992).

LACHNELLA Fr.

L. Virginica E. & E., Proc. Phila. Acad. 349 (1894).

TYPE HABITAT: On decaying wood of *Magnolia Fraseri*, Feb., 1894 (*Nuttall*, discov. 1410, 380).

Gregarious, sessile, .75 to 1.2 mm. diameter. Disk pallid, concave, nearly closed when dry, margin fringed with brown septate hairs, 100 to 125 x 3 μ, outside clothed with shorter reddish-brown hairs. Asci about 50 x 5 μ, clavate-cylindrical, short stipitate, paraphysate, 8-spored. Sporidia sub-biseriate, oblong, 6 to 8 x 1.5 to 2.5 μ.

TRICHOPEZIZA Fuckel.

T. ——— sp.

Torn end of firm dead tree, Short Creek, alt. 1,800 ft. Dec. 16, 1893 (*Nuttall*, 1326).

T. albo-lutea (Pers.) Sacc.?

On rotten log, Short Creek, June 18, 1893, stipitate (*Nuttall*, 1013).

T. capitata (Peck) Sacc.

On leaves *Quercus palustris* on ground in woods, alt. 2.000 ft., June 18, 1893. At Rupert's, July 26, 1894 (*Nuttall*, 1011).

DASYSCYPHA Fr.

D. virginea (Batsch) Fckl.

On dead sticks on wet cliff, and on wet dead wood of *Juglans cinerea*, June 12, 1893 (*Nuttall*, 841).

D. Ellisiana (Rehm.) Sacc.

On *Pinus rigida*, top of Cavendish cliff, April 8, 1894 (*Nuttall*, 1447).

HELOTIELLA Sacc.

H. Nuttallii E. & E., Proc. Phila. Acad., 351 (1894).

TYPE HABITAT: On wet shady side of rotten log, March 15, 1894 (*Nuttall*, discov. 1425, 397).

Ascomata gregarious, sessile, flat-hemispherical, .5 to 1 mm. diameter, cup-shaped when fresh, contracted and sub-spherical when dry with only a small round apical opening, orange color throughout, disk watery-orange, outside and fringed margin paler. Substance fibrous, the fibers prolonged above so as to make a marginal fringe of pale yellow, roughish straight hairs. Asci clavate-cylindrical, sessile, curved, 50 to 60 x 5 to 6 μ. Paraphyses filiform, hardly thickened above, with a series of orange-colored, globose nuclei. Sporidia biseriate, oblong, hya-

line, obtuse, uniseptate, but not constricted, 8 to 10 x 2.5 to 3 μ. The outside of the ascomata is slightly hairy so that the species might be referred to *Solenopeziza* if that is really worthy of generic distinction.

DERMATELLA Karst.

D. viticola E. & E., Proc. Phil. Acad., 352 (1894).

TYPE HABITAT: On dead shoots of *Vitis* (cult.) Nov. 1893 (*Nuttall*, discov. 1337, 295).

Sessile, convex-discoid and pale when moist, concave and flesh-color when dry, and then scarcely projecting above the surface of the bark. .50 to .75 mm. diameter. Asci clavate-cylindrical, about 70 x 12 μ, with filiform paraphyses, 8-spored, sub-sessile. Sporidia subbiseriate, oblong elliptical, hyaline, 1 to 3-septate (3 to 4-nucleate at first), 15 to 18 x 6 to 6.5 μ.

BELONIDIUM Mont.

B. AURELIA (Pers.) DeNot.

Peziza aurelia, Pers. On a dead leaf in rotten log, Monongalia Co., at Little Falls (*Millspaugh*).

ERINELLA Sacc.

E. miniopsis (Ell.) Sacc.

On wet rotten wood, May 1893 (*Nuttall*, 934).

ASCOBOLACEÆ.

ASCOBOLUS, Pers.

A. furfuraceus Pers.

On old dung of cow, June 8, 1893 (*Nuttall*, 974).

A. carbonarius Karst.

On bare spots where logs were burned by forest fire the previous winter, associated with *Geopyxis carbonaria*. It appears that only the prolonged burning of large logs makes proper habitat for this species, as it does not grow where the fire was light. May 20, 1893 (*Nuttall*, 926).

ASCOPHANUS Boud.

A. granuliformis (Cr.) Boud. ?

On dung of cow, Dec. 1893 (*Nuttall*, 1340, 298).

A. carneus (Pers.) Boud.

On dung of cow Oct. 10, 1893 (*Nuttall*, 1249, 182).

DERMATEACEÆ

URNULA Fr.

U. Craterium (Schw.) Fr.

On dead twigs on ground, Short Creek, April 15, 1893 (*Nuttall*, 898).

DERMATEA Fr.

D. Chionanthi E. & E?

Macrostylospores of this species? on *Chionanthus Virginica*, March, 25, 1894 (*Nuttall*, 1454, 426).

D. lobata Ellis.

On the maculæ of *Pestalozzia Guepinii* on leaves of *Rhododendron maximum*. Asci 130 x 12.5 μ spores 15 x 8 μ. Aug. 15, 1895 (*Nuttall* 1162, 132).

TYMPANIS Tode.

T. Oxydendri E. & E., Proc. Phila. Acad., 352 (1894).

TYPE HABITAT: On dead limbs of *Oxydendron arboreum*, Dec. 12, 1893 (*Nuttall* discov., 1296, 258).

Cespitose, 3 to 5 together, erumpent, at length deciduous, black .5 to .75 mm. diameter, contracted below into a short thick stipe, margin subundulate. Asci cylindrical 110 to 130 x 15 to 18 μ including the short stipe. Paraphyses slender, abundant, Sporidia numerous, minute, oblong, hyaline or yellowish 2.5 to 3 x 1 μ, Allied to *T. fasciculata*, but asci larger and sporidia smaller.

CENANGELLA Sacc.

C. Aceris (Hazsl.) Sacc.

On bark of dying *Acer rubrum*, June 10, 1894. Sporidia 15 x 6 μ (*Nuttall*, 1554).

SCLERODERRIS Fr.

S. rhabarbarina (Berk) E. & E.

On *Rubus Baileyanus*, Dec. 8, 1893, Short Creek. Asci total length 63 to 75 x 17 to 21 μ, 8-spored, clavate, very short stipitate. Spores 20 to 27 x 6 to 7.5 μ, nucleate, becoming clearly 3-septate and rather one-sided (*Nuttall*, 1294, 242).

S. pallidula (Cooke) Sacc.

On dead branches and bark of *Acer saccharinum*, L., Feb. 26, 1894. On *Oxydendron arboreum*. Sporidia 20 to 22 x 7 μ (*Nuttall*, 1408, 665).

BULGARIACEÆ.

LEOTIA Hill.

L. lubrica (Scop.) Pers.

On ground, alt. 1,800 ft., Short Creek, Aug. 14, 1893 (*Nuttall*, 1150).

ORBILIA Fr.

O. rubella (Pers.)

On decorticated log, *Liriodendron Tulipifera*, Sept. 19, 1895 (*Nuttall*, 1858, 748).

O. vinosa (A. & S.) Karst.

On *Poria spissa*, Nov. 6, 1893 (*Nuttall*, 1261).

O. occulta (Rehm) Sacc.
On dead log, Aug. 20, 1893 (*Nuttall*, 1202).

O. coccinella (Somm.) Karst.
On dead log *Juglans cinerea*, Short Creek, July 25, 1893 (*Nuttall*, 1134, 663).

O. Xanthostigma Fr.
On decorticated limbs *Magnolia Fraseri*, Sept. 1895 (*Nuttall*, 1855, 742, 743).

BULGARIA Fr.

B. inquinans (Pers.) Fr.
In clefts of bark of trees and railroad ties, Oct. 10, 1893 (*Nuttall*, 1210).

CORYNE Tul.

C. URNALIS (Nyl.) Sacc.
On rotting log *Fagus atropunicea*; under bark of *Quercus alba* log, Monongalia Co., near Morgantown (*Millspaugh*). On wet mossy logs, alt. 1,800 ft. and over, Oct. 10, 1893 (*Nuttall*, 1212, 167).

HOLWAYA Sacc.

H. ophiobolus (Ellis) Sacc.
On bark of dead *Magnolia Fraseri*, alt. 1,800 ft., Dec. 16, 1893, Short Creek (*Nuttall*, 1323, 279).

STICTACEÆ.

PROPOLIS Fr.

P. faginea (Schrad.) Karst.
On *Juglans cinerea* and on old board of *Liriodendron Tulipifera*, Dec. 5, 1894 (*Nuttall*, 1765, 660). On *Liquidambar styraciflua*.

P. Leonis (Tul.) Rehm.
On bark of *Pinus rigida* and *Virginiana*, June 31, 1894 (*Nuttall*, 1581).

STICTIS Pers.

S. fimbriata Schw.
On strobiles of *Pinus Virginiana*, alt. 2,000 ft., March, 1894 (*Nuttall*, 1468, 443). Sporidia 5 to 7 x 1.5 μ.

PHACIDIACEÆ.

RHYTISMA (Pers.) Fr.

R. punctatum (Pers.) Fr.
On leaves of *Acer Pennsylvanicum*, alt., 2,000 ft., Oct. 22, 1893 (*Nuttall*, 1217, 168).

R. decolorans Fr.
On *Xolisma ligustrina*, at Rupert's, July 26, 1894 (*Nuttall*, 1638, 569).

R. Prini Schwein.

On leaves of *Ilex verticillata*, at Rupert's, Sept. 7, 1894 (*Nuttall*, 1677).

PATELLARIACEÆ.

DURELLA Tul.

D. commutata Fckl.

On dead log, Short Creek, Dec. 16, 1893 (*Nuttall*, 1328).

LECANIDION Rabenh.

L. atratum (Hedw.) Rabenh.

On *Aralia spinosa*, Feb. 17, 1894. Sporidia 50 x 12.5 μ (*Nuttall*, 1390, 359).

L. Hamamelidis (Peck) Sacc.

On bark of *Hamamelis Virginica*. Sporidia 1 to 3 septate when mature. Dec, 18, 1894 (*Nuttall*, 1772).

CALICIACEÆ.

CALICIUM Pers.

C. tigillare (B. & Br.) Sacc.

On *Polyporus pergamenus*, Aug. 23, 1893 (*Nuttall*, 1159).

GYMNOASCACEÆ.

EXOASCUS Fckl.

E. DEFORMANS (Berk.) Fckl.

Taphrina deformans Tul. On leaves of *Amygdalus Persica*, Jefferson Co., near Charlestown (*Millspaugh*).

E. PRUNI Fckl.

Taphrina Pruni Tul. On fruits of *Prunus domestica*, Monongalia Co., at Morgantown (*Millspaugh*).

HYSTERIACEÆ.

GLONIUM Mühl.

G. stellatum Mühl.

On rotten oak plank, and on *Sassafras Sassafras*, July 28, 1893 (*Nuttall*, 1128).

G. parvulum (Ger.) Sacc.

On fence rails *Castanea dentata*, April 20, 1894 (*Nuttall*, 1496).

G. simulans Ger.

On old fence rails, alt. 2,000 ft., March 16, 1894. Asci 75 x 7.5 to 10 μ. Spores 13 to 18 x 5 μ. On *Juglans cinerea*, asci 65 x 10 μ. Spores 12 to 15 x 4 to 5 μ (*Nuttall*, 1415).

HYSTERIUM Tod.

H. Kalmiæ Schw.?

On dead *Kalmia latifolia*, Nov., 1893 (*Nuttall*, 1287, 232).

HYSTEROGRAPHIUM Corda.

H. insidens (Schw.) Sacc.

On old fence rails, April 6, 1894. Largest spores 43 x 7.5 μ, 11-septate (*Nuttall*, 1452).

H. subrugosum (C. & E.) Sacc.

On old fence rails, May 26, 1894. Spores 33 to 35 x 12.5 μ (*Nuttall*, 1522).

H. Mori (Schw.) Rehm.

On old fence rails, April 6, 1894 (*Nuttall*, 1451).

HYPODERMA DC.

H. DESMAZIERI DuBy.

On living leaves or *Pinus echinata*. Wood Co., near Lockhart's Run (*Millspaugh*).

H. virgultorum DC.

On *Rubus Baileyanus*, Dec. 5, 1893 (*Nuttall*, 1293).

H. commune (Fr.) Duby.

On *Hydrangea arborescens*, Nov. 3, 1893 (*Nuttall*, 1259). On old petioles *Aralia spinosa* (*Nuttall*, 1830, 719).

LOPHODERMIUM Chev.

L. Rhododendri (Schw.)

On *Rhododendron maximum*, Sept. 4, 1893 (*Nuttall*, 1192).

L. Pinastri (Schrad.) Chev.

On leaves of *Pinus rigida*, Short Creek, Aug. 2, 1893 (*Nuttall*, 1158).

L. culmigenum (Fr.) Karst.

On straw brought in from Ohio, May 24, 1894. Measurements of asci and spores prove to be the same as those of *L. arundinaceum* (Schrad.) Chev. (*Nuttall*, 1496).

OSTROPA Fr.

O. cinerea (Pers.) Fr.?

Issuing from cracks in a decorticated log, May 31, 1894 (*Nuttall*, 1526).

AGARICACEÆ.

AMANITA Pers.

A. verna Fr.

On ground in open woods, July 11, 1893. Spores round 7.5 μ (*Nuttall*, 964).

A. MUSCARIA Linn.

Rooted on buried limb of *Betula lenta*, Grant Co., near Bayard (*Millspaugh*).

An ecarunculate form, apparently of this species, on leaf mold in deep woods, same locality.

A. muscaria alba Peck.

On ground in laurel thicket, Short Creek, alt. 2,000 ft. Has the odor of buttermilk. Spores 9 x 6 μ (*Nuttall*, 1131).

A. flavo-rubens Berk.

On ground in woods, Short Creek, July 6, 1893 (*Nuttall*, 1078).

A. polypyramis B. & C.

Among bushes, alt. 2,400 ft., July 6, 1893. Largest stipes 15 cm. long, thick, heavy and deep in ground. Pileus 15 cm. broad. Spores 10 x 6 μ (*Nuttall*, 1101).

AMANITOPSIS Roze.

A. nivalis (Grev.) Sacc.

In loam on rocks in laurel tangle, June 26, 1893 (*Nuttall*, 1004).

TRICHOLOMA Fr.

T. fumoso-luteum Peck?

On unknown substance, June 15, 1893, Short Creek (*Nuttall* 990).

CLITOCYBE Fr.

C. illudens Schwein.

On old stumps in clusters of about eight, dark and deep rich orange color throughout, +20 cm. x +12 cm. broad, stipe + 25 mm. thick. Spores +6 μ diameter, uneven. July 14, 1893 (*Nuttall*, 1093).

C. laccata Scop.

Common in wet sand, bank of Short Creek, alt. 2,000 ft., July 28, 1893. Spores 10 μ diameter, echinate (*Nuttall*, 1124).

COLLYBIA Fr.

C. RADICATA Relh.

On leaf mold in rich woods, Monongalia Co., near Morgantown (*Millspaugh*). May 17, 1893 (*Nuttall*, 980).

C. platyphylla Fr.

On mold and moss on trunk of tree, Short Creek, June 15, 1893 (*Nuttall*, 981).

C. velutipes Curt.

About roots of rotting stumps, Jan. 31, 1895 (*Nuttall*, 830).

C. conigenoides Ellis.

On last year's cones *Magnolia Fraseri*, Sept. 18, 1895 (*Nuttall*, 1848).

C. DRYOPHILA Bull.

In moss on log in deep woods, Grant Co., near Bayard (*Millspaugh*).

MYCENA Fr.

M. _____ sp.

White. On mossy stump, July 4, 1893 (*Nuttall*, 1019).

M. GALERICULATA Scop.

In rich woods under oak twig, and oak bark on log, Monongalia Co., near Morgantown (*Millspaugh*). On damp dead logs, May 7, 1893 (*Nuttall*, 930).

M. epipterygia Scop.

On moss-covered log and in clefts of bark, Feb. 28, 1893 (*Nuttall*, 948).

OMPHALIA Fr.

O. CAMPANELLA Batsch.

On leaf mold at base of *Castanea dentata*, Preston Co., near Terra Alta (*Millspaugh*). On rotten log in thicket, June 18, 1893 (*Nuttall*, 1009).

PLEUROTUS Fr.

P. corticatus Fr.?

On fallen *Acer* sp. Gills not anastomosing, July 28, 1893 (*Nuttall*, 1123).

P. sapidus Kalchbr.

On dead log, Feb. 2, 1893 (*Nuttall*, 850).

P. serotinus Schrad.

On dead trunks, Nov. 20, 1893 (*Nuttall*, 1267).

P. cyphelliformis Berk.

On dead stems of *Polymnia Uvedalia*, Nov. 15, 1894 (*Nuttall*, 1742).

P. niger Fr.

On bark of dead tree, May 13, 1893 (*Nuttall*, 953).

HYGROPHORUS Fr.

H. nitidus B. & C.

On decayed log, May 14, 1893 (*Nuttall*, 968).

LACTARIUS Fr.

L. cilicioides Fr.

On border of woods and swamp, July 4, 1893 (*Nuttall*, 1020).

RUSSULA Pers.

R. emetica Fr.?

In woods, July 4, 1893 (*Nuttall*, 1021).

CANTHARELLUS Adans.

C. minor Peck?

On ground in woods, alt. 2,000 ft., July 4, 1893 (*Nuttall*, 1023).

C. Wrightii Berk?

Wet sand of river bank in shade, July 18, 1893. Whole plant light red except gills, which are little deeper red than salmon-color, gills decurrent, veined between, pileus more convex than

plane, and depressed edge wavy, rather tough. Largest 4 cm. broad, stem 5 cm. high, 5 mm. thick. Spores 7.5 to 8.5 x 3.5 to 5 μ, apparently rough and guttulate inward (*Nuttall*, 1104).

C. tubæformis Fr.?

On rotten wood in woods, alt. 2,000 ft., July 4, 1893 (*Nuttall*, 1022).

C. floccosus Schw.

On open bank of stream in laurel thicket, alt. 2,000 ft., June 20, 1893. Largest squamules .75 cm. long, thick and triangular, forming a cone which closes the funnel below the top an inch or more. Spores 15 x 7.5 μ (*Nuttall*, 992).

NYCTALIS Fr.

N. asterophora Fr.

On dead Agaric in deep damp woods, July 14, 1893. Stars 20 μ diameter (*Nuttall*, 1096).

MARASMIUS Fr.

M. semihirtipes Peck.

On dead leaves, sticks, etc., Short Creek, May 14, 1893 (*Nuttall*, 967).

M. ramealis (Bull.) Fr.

Very common on twigs and leaves in laurel thickets, June 15, 1893 (*Nuttall*, 994).

M. OPACUS B. & C.

Common on dead branches *Rhododendron maximum*, Grant Co., near Bayard (*Millspaugh*).

M. campanulatus Peck.

On dead leaves and sticks in damp woods, Short Creek, alt. 1,300 ft., Aug. 16, 1893 (*Nuttall*, 1153).

M. ROTULA (Scop.) Fr.

On dead limb of *Betula lenta*, Grant Co., near Bayard (*Millspaugh*). On stick in open woods, June 8, 1893 (*Nuttall*, 972).

LENTINUS Fr.

L. STRIGOSUS Fr.

On dead log *Betula lutea*, Grant Co., near Bayard (*Millspaugh*). On dead logs, common, May 6, 1893 (*Nuttall*, 904).

PANUS Fr.

P. stipticus (Bull.) Fr.

On fallen dead limb, Jan. 29, 1893 (*Nuttall*, 950).

P. dorsalis Bosc.

On *Tsuga Canadensis*, Sept., 1893 (*Nuttall* 1253, 196).

TROGIA Fr.

T. crispa (Pers.) Fr.

On various dead dry logs and limbs, March 21, 1893 (*Nuttall*, 875).

LENZITES.

L. betulina (Linn.) Fr.
On logs, Sept. 6, 1893 (*Nuttall*, 837).

L. SEPIARIA Fr.
On decorticated stumps *Picea Mariana*, Tucker Co., near Falls of Blackwater (*Millspaugh*).
A resupinate form on dead logs *Tsuga Canadensis* Grant Co.

L. abietina (Bull.) Fr.
On dead branches *Tsuga Canadensis*, alt. 1,600 ft., Dec. 15, 1893 (*Nuttall*, 1301).

L. corrugata Klot.
On *Castanea dentata*, alt. 1,800 ft., Dec. 19, 1893 (*Nuttall*, 1302).

SCHIZOPHYLLUM Fr.

S. COMMUNE Fr.
On bark log *Quercus alba*, Grant Co., near Bayard. On dead twig *Pyrus Malus*, Monongalia Co., near Morgantown (*Millspaugh*) On dead logs, Jan. 30, 1893 (*Nuttall*, 827).

VOLVARIA Fr.

V. BOMBYCINA (Pers.) Fr.
On dead insect sp? Monongalia Co., near Morgantown (*Millspaugh*).

CLITOPILUS Fr.

C. abortivus Fr.
Wet woods, alt. 1,800 ft, aborted specimens in quantity, Sept. 4, 1893 (*Nuttall*, 1190).

AGARICUS Linn.

A. Rodmani Peck.
On ground, June 28, 1893 (*Nuttall*, 1005).

A. campester Linn.
On lawn, June 24, 1893 (*Nuttall*, 1002).

A. silvicola Vitt.
In woods, Short Creek, alt. 1,150 ft. (*Nuttall*, 1699). Spores 5 to 7 x 3 to 4 μ.

A. silvaticus Schæff.
In woods, Short Creek, July 2, 1893 (*Nuttall*, 1117).

STROPHARIA Fr.

S. STERCORARIA Fr.
On decaying vegetable matter, Preston Co., near Terra Alta (*Millspaugh*).

HYPHOLOMA Fr.

H. SUBLATERITIUM Schæff.
Under bark log *Fraxinus Americana*, Monongalia Co., near Morgantown (*Millspaugh*).

H. elæodes Fr?
On sticks on ground, May 18, 1893 (*Nuttall*, 858).

COPRINUS Pers.

C. variegatus Peck?
On stick in shady place, Aug. 11, 1893 (*Nuttall*, 1143).

C. micaceus (Bull) Fr.
On bases of stumps in woods, July 8, 1893 (*Nuttall*, 1081).

C. domesticus (Pers.) Fr.
In woods on mixture of manure and leaf mold. June 29, 1893 (*Nuttall*, 1007).

C. semilanatus Peck?
In heavily manured asparagus bed in garden, Apr. 29, 1893 (*Nuttall*, 903).

C. ephemerus Fr.
On horse dung, July 2, 1893 (*Nuttall*, 1113).

C. angulatus Peck.
On baked soil where log had been burned, with *Peziza carbonaria*, May 8, 1893 (*Nuttall*, 932).

PANÆOLUS Fr.

P. CAMPANULATUS Linn.
On cow dung in deep coniferous woods, Grant Co., near Bayard (*Millspaugh*). Plentiful on manured lawn, May 8, 1893, (*Nuttall*, 933).

PSATHYRELLA Karst.

P. disseminata Pers.?
In rotten mold about the base of a stump, a mass about 1 meter containing perhaps thousands of specimens. Specimens 3 to 5 cm. high, thin, fleshless. Pileus 1 cm. broad, 8 mm. high, slightly umbonate, sulcate striate, mealy, gray. Stems white, smooth 1 mm thick, at first slightly furfuraceous. Largest stems 6 cm., broadest pileus 18 mm. Spores 6 to 10 x 3 to 5 μ (*Nuttall*, 1189). Sept. 3. 1893.

POLYPORACEÆ.

BOLETUS Dill.

B. speciosus Frost.
On ground in woods, alt. 2,000 ft. July 16, 1893 (*Nuttall*, 1099).

B. chrysenteron Fr.
In deep woods, June 18, 1893 (*Nuttall*, 987).

B. parasiticus Bull.
On *Scleroderma vulgare* wet woods, alt. 1,800 ft., Sept. 4, 1893 (*Nuttall*, 1191).

B. edulis Bull.

Old field under *Rhus copallina*, June 20, 1893. Pileus 15 x 10 cm. stipe 4.5 cm. Spores 10 to 14 x 3 to 4 μ (*Nuttall*, 990).

STROBILOMYCES Berk.

S. strobilaceus (Scop.) Berk.

Shady fence row, alt. 2,300 ft., Sept. 16, 1893 (*Nuttall*, 1100). Spores about 10 μ, round.

FISTULINA Bull.

F. hepatica Fr.

On dead stumps, alt. 2,000 ft., July 16, 1893 (*Nuttall*, 1102).

POLYPORUS Mich.

P. brumalis (Pers.) Fr.

On dead logs, Mar. 6, 1893 (*Nuttall*, 1835).

P. pocula (Schw.) B. & C.

On dead *Rhus copallina*, Glade Creek, May 4, 1894 (*Nuttall*, 1495, 478).

P. arcularius (Batsch) Fr.

On rotten logs, Short Creek, May 6, 1893. Largest 4 cm. broad, stipe 2.3 cm. (*Nuttall*, 929).

P. varius Fr.

On dead logs, Aug. 18, 1893. Thin, tough, 20 cm. broad (*Nuttall*, 840).

P. UMBELLATUS Fr.

In dry exposed hollow of oak stump, Monongalia Co., near Morgantown (*Millspaugh*).

P. lactifluus Peck.

On ground in open woods, June, 1893; Aug. 24, 1893. Height 30 cm., greatest breadth 60 cm. (*Nuttall*, 1171).

P. BERKELEYI Fr.

In dry exposed hollow of oak stump, Monongalia Co., near Morgantown (*Millspaugh*).

P. SULPHUREUS (Bull.) Fr.

On decaying oak stump, Monongalia Co., near Morgantown (*Millspaugh*).

P. nidulans Fr.

P. niveus, Fr. On dead trunk *Prunus serotina*, Short Creek, alt. 1,000 ft., July 8, 1894 (*Nuttall*, 1599, 548).

P. ADUSTUS (Willd.) Fr.

On dead branch *Rhus hirta*, and in decayed stump *Hicoria ovata*, Monongalia Co., near Morgantown (*Millspaugh*). On sides of dead logs, Feb. 2, 1893 (*Nuttall*, 851).

P. hypococcineus Berk?
A resupinate form of this species, or new (E. & E). Underside of dead log, Oct. 15, 1893 (*Nuttall*, 1214, 166).

P. pubescens (Schum.) Fr.
On dead *Betula* sp. July 27, 1894 (*Nuttall*, 1673).

P. resinosus (Schrad.) Fr.
On dead log, March 24, 1893 (*Nuttall*, 879).

P. Pilotæ Schw.
On dead rotten log, Sewell Valley, Aug. 23, 1894 (*Nuttall*, 1661).

FOMES Fr.

F. LUCIDUS (Leys.) Fr.
On dead logs *Tsuga Canadensis*, Preston Co., near Terra Alta (*Millspaugh*). On old stumps in deep woods, April 10, 1893, full grown in June (*Nuttall*, 892).

F. volvatus Peck.
On west side *Pinus Virginiana*, March 8, 1893 (*Nuttall*, 870).

F. pinicola Fr.
On fallen trunks *Tsuga Canadensis*, Short Creek, May 1, 1893 (*Nuttall*, 924).

F. APPLANATUS (Pers.) Wallr.
On dead *Acer saccharum* and *Quercus palustris*, *alba* and *rubra* Wood Co., near Kanawha Station, and McDowell Co., near Elkhorn. On dead *Fraxinus Americana*, Grant Co., near Bayard, and Monongalia Co., near Morgantown (*Millspaugh*). On dead logs, Jan., 1893 (*Nuttall*, 828).

F. FOMENTARIUS (Linn.) Fr.
On dead *Betula lutea*, Grant Co., near Bayard (*Millspaugh*). On dead log, at Rupert's, July 26, 1894 (*Nuttall*, 1635).

F. RIMOSUS Berk.
On dead *Robinia Pseudacacia*, Monongalia Co., near Morgantown (*Millspaugh*). On same sp. and on oak? alt. 2,000 ft., March 21, 1893 (*Nuttall*, 914).

F. CARNEUS Nees.
On dead decorticated *Picea Mariana*, Tucker Co., near Falls of Blackwater (*Millspaugh*). On *Pinus Virginiana*, March, 1893 (*Nuttall*, 865).

POLYSTICTUS Fr.

P. PERGAMENUS Fr.
On dry exposed oak railroad tie, Monongalia Co., near Morgantown (*Millspaugh*). On various dead trees, Feb. 17, 1893 (*Nuttall*, 847).

P. CINNABARINUS (Jacq.) Fr.
On dead limbs of cultivated *Prunus*, Monongalia Co., near Morgantown (*Millspaugh*). On various dead deciduous trees, Jan. 31. 1893 (*Nuttall*, 829).

P. VERSICOLOR (Linn.) Fr.

On decorticated stump *Picea Mariana*, Tucker Co., near Falls of Blackwater. Under bark of log *Quercus alba*, Monongalia Co., near Morgantown (*Millspaugh*). On various dead trees, Feb., 1893 (*Nuttall*, 834).

P. HIRSUTUS Fr.

On dead twig cultivated *Pyrus Malus*, Monongalia Co., near Morgantown. On dead *Betula lutea*, and on log *Liriodendron Tulipifera*. A form with white spores, on roots fallen *Betula lenta*, Grant Co., near Bayard (*Millspaugh*). On *Fagus atropunicea*, Keeney's Creek, Oct. 20, 1893 (*Nuttall*, 1211).

P. ABIETINUS Fr.

On fallen *Tsuga Canadensis*, Grant Co., near Bayard (*Millspaugh*). On *Pinus Virginiana*, March 4, 1894 (*Nuttall*, 1420, 390).

MUCRONOPORUS E. & E.

M. Everhartii E. & Gall.

On *Ulmus pubescens*, Nov. 6, 1893 (*Nuttall*, 1598).

M. Gilvus (Sz) E. & E.

On *Castanea dentata*, July 20, 1894 (*Nuttall*, 1169, 558).

M. ferruginosus (Schrad.) E. & E.

On *Juglans cinerea*, Aug. 29, 1893 (*Nuttall*, 1183).

PORIA Pers.

P. vulgaris Fr.

On various dead limbs, Feb. 2 and Nov. 20, 1893 (*Nuttall*, 833). A nodular form on oak ties, Nov. 5, 1894 (*Nuttall*).

P. obducens Pers.

On underside of dead log, Feb. 8, 1893 (*Nuttall*, 1297, 246).

P. nigra Berk.

On side and beneath dead *Hicoria*? log. Effused, long and narrow, perennial (*Nuttall*, 1268).

P. tomento-cincta B. & R.

Effused on bark underside of log *Betula lenta*, 60 x 30 cm. One layer taken off on Sept. 16, the same surface of the bark was found to be again covered with the species on Oct. 5, 1895 (*Nuttall*, 1865, 752). On *Magnolia Fraseri*, Nov. 1895.

P. vaporaria Fr.

On *Prunus serotina*, Dec. 8, 1893 (*Nuttall*, 1295, 244).

P. Tulipiferæ Schw.

On *Liriodendron Tulipifera*, April 13, 1893 (*Nuttall*, 893).

P. xantha Fr.

On *Pinus Virginiana*, March 21, 1893 (*Nuttall*, 913).

P. micans (Ehrenb.) Fr.

On burned log, Short Creek, alt. 1,300 ft., Nov. 24, 1893 (*Nuttall*, 1277, 223).

P. corticola Fr.

Underside of young dead *Liriodendron Tulipifera*, diffused through clefts of bark, incrusting other polypori, etc. Alt. 925 ft., Nov. 20, 1893 (*Nuttall*, 1280).

P. sinuosa Fr.?

Appears to be between this and *Irpex obliquus*, preferably this (E. & E.). On *Kalmia latifolia*. Short Creek, alt. 1,800 ft., Aug. 12, 1893 (*Nuttall*, 1166, 138).

P. farinella Fr.

On dead log, Short Creek, alt. 1,800 ft., Sept. 12, 1893 (*Nuttall*, 1204, 160).

TRAMETES Fr.

T. Ohioensis Berk.

On dead standing sapling, Short Creek, alt. 1,800 ft., April 10, 1894 (*Nuttall*, 1467).

T. SEPIUM Berk.

On dry railroad ties, Monongalia Co., near Morgantown (*Millspaugh*). Resupinate form on dead oak beams over a boiler, Dec. 15, 1893 (*Nuttall*, 1300).

T. mollis Fr.?

On drift wood, March 1893 (undeveloped) (*Nuttall*, 1597, 550).

T. odorata Wulf.

On dead limbs in a drain, July 20, 1894 (*Nuttall*, 1628, 557). *Ozonium auricomum*, Link., a curious tawny mycelium, supposed to be intimately connected with this species was found here with this specimen.

D. ambigua Berk.

Trametes ambigua (Berk.) Fr. On dead *Acer* sp., Feb. 2, 1893 (*Nuttall*, 846).

DÆDALIA Pers.

D. confragosa Pers.

On dead *Cornus florida*, Feb. 20, 1894 (*Nuttall*, 1774).

D. unicolor (Bull.) Fr.

On dead *Hicoria ovata*, Dec. 8, 1893 (*Nuttall*, 1298, 247).

MYRIADOPORUS Peck.

M. INDURATUS Peck.

Top of decayed oak stump, Monongalia Co., near Morgantown (*Millspaugh*). Professor Peck remarks, in a letter, on receipt of the specimens: "This is probably only an imperfect condition of *Poria abducens*."

FAVOLUS Fr.

F. Europæus Fr.

On dead branch, Feb. 12, 1894 (*Nuttall*, 1360). Spores 12.5 x 3 μ somewhat curved, obliquely apiculate. Feb. 17, 1895 (*Nuttall*, 1788).

GLŒOPORUS Mont.

G. CONCHOIDES Mont.

On oak chips, Monongalia Co., near Morgantown (*Millspaugh*).

MERULIUS Hall.

M. TREMELLOSUS Schrad.

Under bark *Quercus alba* log, Monongalia Co., near Morgantown (*Millspaugh*). On *Alnus rugosa*, Oct. 31, 1893 (*Nuttall*, 1220).

M. rubellus Peck.

On dead *Quercus alba*, Short Creek, Nov. 9, 1893 (*Nuttall*, 1244).

Also found parasitic on *Stereum versicolor*. In some cases the hymenium simply covers the under surface of the Stereum. In nearly all specimens observed it grows at the base of the host to which it is at least partly adherent. Largest pileus 5 x 5 cm., sometimes laterally connected for 15 cm.

M. Corium Fr.

On branches, April 27, 1895 (*Nuttall*, 1822, 699).

M. molluscus Fr.

On dead limb *Tsuga Canadensis*, Short Creek, alt. 1,800 ft., Feb. 8, 1894 (*Nuttall*, 1399).

M. ambiguus Berk.

On dead *Prunus serotina*, Short Creek, alt. 975 ft., Jan. 1894 (*Nuttall*, 1602).

M. lachrymans (Jacq.) Fr.

On bottom of box in cellar, Feb. 14, 1894 (*Nuttall*, 1379, 341).

M. pulverulentus Fr.

Underside of old logs, Oct. 19, 1893. Spores orange colored, nucleate, 10 x 6 μ (*Nuttall*, 1208).

POROTHELIUM Fr.

P. lacerum Fr.

On dead trunk, Feb. 11, 1894 (*Nuttall*, 1381, 343).

SOLENIA Hoffm.

S. ochracea Hoffm.

On dry dead log, Short Creek, alt. 1,800 ft., Dec. 16, 1893 (*Nuttall*, 1327, 285).

S. villosa Pers.

On fallen dead limb of *Quercus* sp., Sept. 1895 (*Nuttall*, 1854, 741).

HYDNACEÆ.

HYDNUM Linn.

H. imbricatum Linn.
In oak woods, June 18, 1893 (*Nuttall*, 988).

H. adustum Schwein.
On dead limbs on ground, Aug. 11, 1893. Nuclei at first cream-colored gradually changing from perifery to center through reddish purple to dark brown (*Nuttall*, 863).

H. coralloides Scop.
In decayed cleft on living *Fagus atropunicea*, Feb. 13, 1893 (*Nuttall*, 845).

H. erinaceus Bull.
On top dead log and in hollow of living *Fagus atropunicea*, alt. 1,800 ft., Nov. 27, 1894 (*Nuttall*, 1752).

H. ochraceum Pers.
Underside of dead log, April 7, 1893. *Stegonotis fusca* found growing upon this species (*Nuttall*, 891).

H. croceum (Schw.) Fr.
Effused in crevices of dead log, Short Creek, alt. 1,800 ft., March 6, 1894 (*Nuttall*, 1426, 398).

H. cinnabarinum (Schw.) Fr.
Effused under bark of dry dead limb, June 20, 1893 (*Nuttall*, 997).

H. ———— sp.
Underside old decayed log, Feb. 13, 1893. Effused 36 x 12 cm. or more (*Nuttall*, 844).

TREMELLODON Pers.

T. gelatinosum (Scop.) Pers.
On dead *Tsuga Canadensis* Aug. 13, 1893 (*Nuttall*, 1148).

IRPEX Fr.

I. LACTEUS Fr.
On dead *Rhus hirta*, Monongalia Co., near Morgantown (*Millspaugh*).

I. sinuosus Fr.
On dead sticks, Dec. 10, 1893 (*Nuttall*, 1309, 255).

I. obliquus (Schrad.) Fr.?
On *Magnolia Fraseri*, Feb. 8, 1894 (*Nuttall*, 1385, 347).

RADULUM Fr.

R. orbiculare Fr.
On *Carpinus Caroliniana?* Nov. 27, 1893 (*Nuttall*, 1270).

R. Magnoliæ B. & C.

On *Magnolia Fraseri*, Feb. 9, 1894, Short Creek, alt. 1,800 ft. (*Nuttall*, 1352).

PHLEBIA Fr.

P. merismoides Fr.

On mossy bark of dead log, Dec. 1, 1893 (*Nuttall*, 1289). On *Magnolia Fraseri*, Nov. 1895.

P. radiata Fr.

On *Alnus rugosa*, Oct. 31, 1893 (*Nuttall*, 1219).

GRANDINIA Fr.

G. granulosa Fr.

On underside dead log, May 20, 1893 (*Nuttall*, 1304).

G. crustosa (Pers.) Fr.

On *Rhododendron maximum*, May 20, 1893. On *Liquidambar Styraciflua*, Oct. 2, 1894 (*Nuttall*, 909 ident. Massee).

ODONTIA Pers.

O. farinacea Fr.

Underside dead *Tsuga Canadensis*, Nov. 9, 1893, Short Creek, alt. 1,300 ft. (*Nuttall*, 1245).

KNEIFFIA Fr.*

K. setigera Fr.

In interstices dead log, Dec., 1893 (*Nuttall*, 1290, 231).

THELEPHORACEÆ.

THELEPHORA Ehrh.

T. sebacea Pers.

On stem of *Aster* sp., damp shady woods, July 25, 1893 (*Nuttall*, 1120).

T. pedicellata Schwein.

On *Ostrya Virginiana*, Feb. 8, 1894 (*Nuttall*, 1370, 328).

STEREUM Pers.

S. versicolor (Sw.) Fr.

On *Quercus* sp. and *Betula lenta*, March 7, 1893 (*Nuttall*, 856).

S. fasciatum Sz.

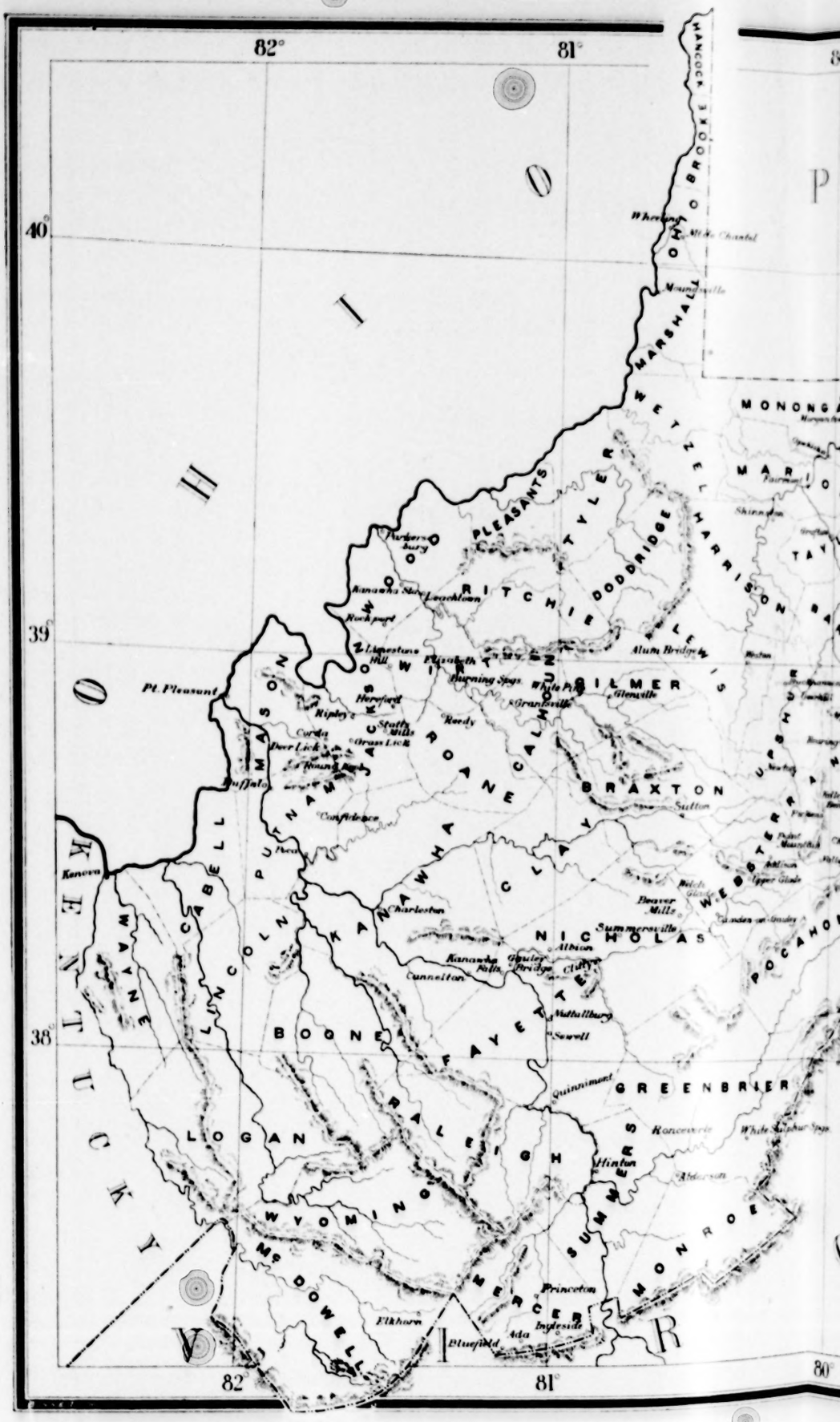
In dead stumps, alt. 2,000 ft., March 8, 1893 (*Nuttall*, 860).

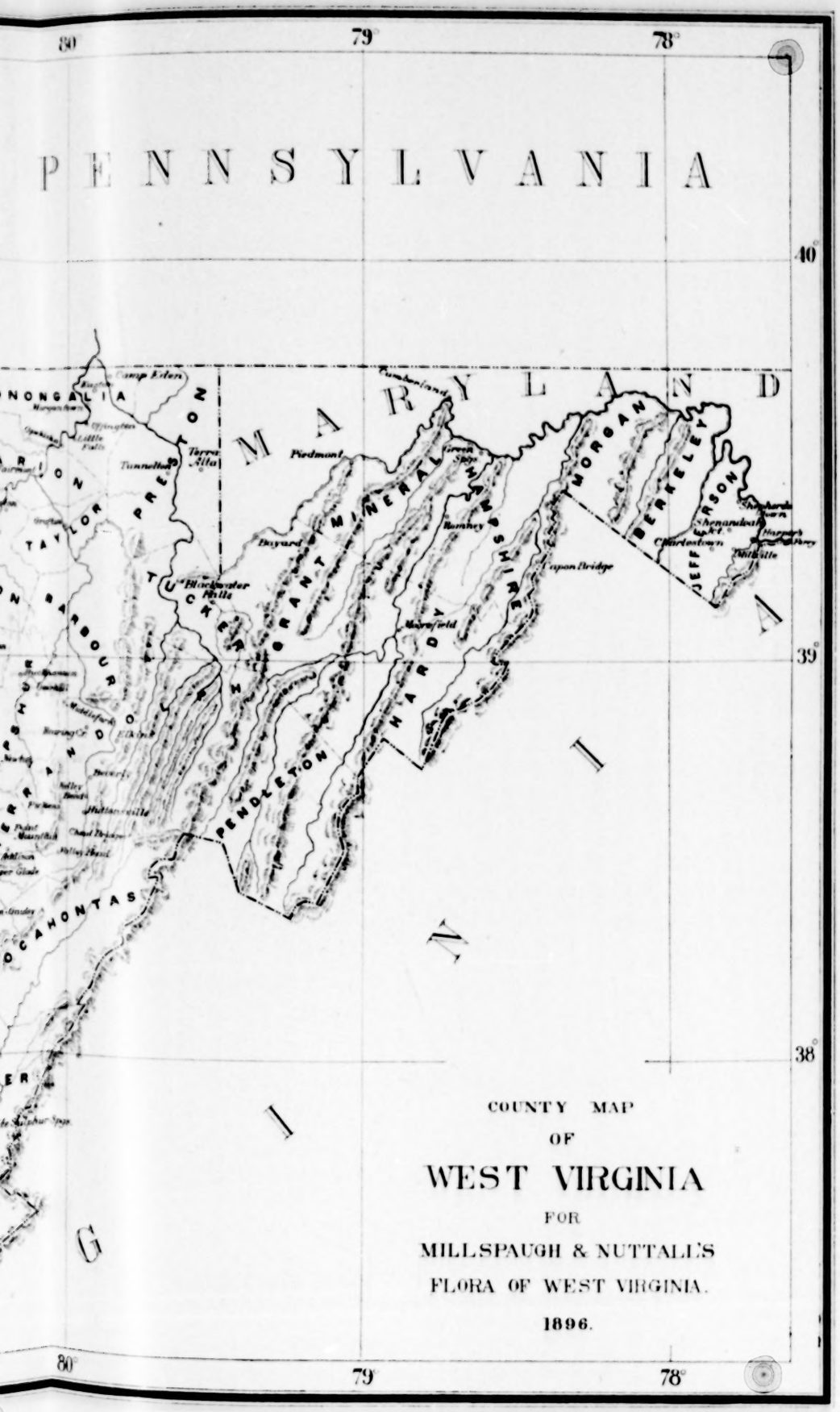
S. VERSICOLOR *var.* (Peck).

On dry oak railroad ties, Monongalia Co., near Morgantown (*Millspaugh*).

* A section of the genus Œnothera has been elevated to generic rank by Raimann, in Engler & Prantl's *Natur. Pflanzenf.*, and Spach's *Kneiffia* (1835) re-instated to designate it. Fries' genus Kneiffia (1836) has, however, been so long established in mycologic literature, that we are loth to make any change at this time, feeling that the re-instating of Spach's Kneiffia is hardly proper, with Fries' genus well established.

FIELD COLUMBIAN MUSEUM.





COUNTY MAP
OF
WEST VIRGINIA
FOR
MILLSPAUGH & NUTTALL'S
FLORA OF WEST VIRGINIA.
1896.

S. purpureum Pers.
On stump in pine woods (*Liriodendron?*) Dec. 9, 1893 (*Nuttall*, 1281, 391).

S. hirsutum (W.) Fr.
On log, Nov. 24, 1893. Short Creek, alt. 1,300 ft. (*Nuttall*, 1277, 224).

S. sanguinolentum (A. & S.) Fr.
On *Tsuga Canadensis*, Feb. 8, 1894 (*Nuttall*, 1386, 251).

S. SULPHURATUM B. & Rav.
On log *Quercus alba*, Monongalia Co., near Morgantown (*Millspaugh*).

S. FRUSTULOSUM (Pers.) Fr.
On log *Quercus* sp., Monongalia Co., near Morgantown (*Millspaugh*). On dead wood, March 7, 1893 (*Nuttall*, 857).

S. Pini Fr.
On *Pinus Virginiana*, April 6, 1894 (*Nuttall*, 1469, 445).

S. ochraceo-flavum Schw.
On small dead twigs, March 21, 1894 (*Nuttall*, 1416).

S. albo-badium Schwein.
On dead sticks and twigs of various trees, April 27, 1893 (*Nuttall*, 1269).

S. SERICEUM Schw.
On dead twig *Betula lenta*, Grant Co., near Bayard (*Millspaugh*). On *Rhus copallina*, March 6, 1894 (*Nuttall*, 1419, 389).

S. COMPLICATUM Fr.
On roots of overturned *Betula lenta*, Grant Co., near Bayard; on dry oak railroad ties, Monongalia Co., near Morgantown (*Millspaugh*). On dead trees and on *Quercus Prinus*, Dec. 8, 1893 (*Nuttall*, 867, 235).

S. versiforme B. & C.?
On *Castanea dentata*, Jan. 18, 1893 (*Nuttall*, 1347, 305).

S. triste B. & C.
On *Rhododendron maximum* in thicket, alt. 1,800 ft. Feb. 8, 1894 (*Nuttall*, 966, 350).

S. **acerinum** Pers.
On living tree trunks, March 7, 1893 (*Nuttall*, 858).

HYMENOCHÆTE Lev.

H. rubiginosa (Schr.) Lev.
On dead log, March, 1893 (*Nuttall*, 911).

H. tabacina (Sow.) Lev.
On dead twigs, March 1893 (*Nuttall*, 910).

H. CORRUGATA (Fr.) Lev.

On decorticated limb *Betula lenta*, Grant Co., near Bayard (*Millspaugh*). On *Magnolia Fraseri*, Feb. 8, 1894. Setæ 38 x 7·5 μ (*Nuttall*, 1364).

H. unicolor B. & C.?

On *Betula lenta*, on dead *Kalmia latifolia*? July 1, 1893 (*Nuttall*, 1111, 96).

CORTICIUM Fr.

C. salicinum Fr.

On dead *Salix nigra*, March 15, 1894 (*Nuttall*, 1401).

C. Oakesii B. & C.

On living *Ostrya Virginica*, March 21, 1893 (*Nuttall*, 877).

C. globiferum E. & E.

Underside of dead log in deep laurel thicket, Short Creek, March 25, 1893 (*Nuttall*, 940).

C. arachnoideum Berk.

On dead damp twigs in dense pile, Jan. 18, 1894. Diffused for 30 x 8 cm. Spores 4 to 5 x 2 to 3 μ. The species when fresh has a wrinkled or crusted appearance looking very like a *Merulius*, but soon becomes flat and plane (*Nuttall*, 1344, 303).

C. radiosum Fr.

On dead trunk, partly beneath loose bark, Short Creek, May 18, 1893 (*Nuttall*, 965).

C. leve Pers.

On *Hamamelis Virginica*, Dec. 20, 1894 (*Nuttall*, 1500).

C. albo-flavescens E. & E., sp. nov.

TYPE HABITAT: On bark of dead *Tsuga Canadensis*, Feb. 24, 1894 (*Nuttall*, discov. 1394).

At first orbicular, subpezizoid, 1 to 2 mm. diameter, becoming more irregular in shape and 1 cm. or more diameter, lower stratum milk-white, consisting of loosely interwoven, branching threads, and extending out beyond the pale-olivaceous or yellowish, membranaceous hymenium so as to form a thin subfimbriate, white margin. Spores abundant, globose, with a single large nucleus, 4 to 6 μ diameter, slightly colored.

The hymenium has only a slight tinge of olive and is perhaps better described as light-drab color.

C. leptaleum E. & E., sp. nov.

TYPE HABITAT: On under side dead sapling *Magnolia Fraseri*, alt. 1,800 ft. April 11, 1895 (*Nuttall*, discov. 1803, 690).

Thin, closely adnate, grayish-white, pulverulent, soon cracking into areas 2 to 3 mm across, with margins incurved so as to resemble the shallow cups of some *Peziza*. Spores oblong, hyaline, continuous, 10 to 12 x 4 μ, borne on cylindrical basidia 30 to 40 x 6 μ, with two stout sporophores. There are also other smaller

(immature)? sporidia, globose (4 to 6 μ) or elliptical, 5 to 7 x 3 to 3.5 μ. The membrane on which the hymenium stands where exposed on the incurved margin of the pezizoid areas is pale brown.

C. Petersii B. & C.
On *Betula* sp. and *Vitis* sp., March 21, 1893 (*Nuttall*, 912).

C. colliculosum B. & C.
On dead logs in laurel thicket, Short Creek, May 1893 (*Nuttall*, 1088).

C. prasinum B. & C.
On dead burned log, Feb. 2, 1894 (*Nuttall*, 1382, 344).

C. lilacino-fuscum B. & C.
On dead limb *Hicoria* sp., Short Creek, alt. 1,800 ft., March 5, 1894 (*Nuttall*, 1403).

C. ochraceum Fr.
On underside dead log *Tsuga Canadensis*, May 8, 1893 (*Nuttall*, 931).

C. incarnatum (Pers.) Fr.
On underside dead log and on *Ulmus pubescens*, April 18, 1893 (*Nuttall*, 923).

C. lilacinum Schroet.
On firm wood of dead log, March 6, 1894, Short Creek, alt. 1,800 ft. (*Nuttall*, 1427, 399).

C. subgiganteum Berk.
On *Hicoria ovata*, Dec. 14, 1893. Spores 16 x 5 μ (*Nuttall*, 1312, 262).

C. martianum B. & C.
On underside of wet log, Dec. 16, 1893. When fresh this species is the color of fresh blood. Short Creek, alt. 1,800 ft. (*Nuttall*, 1324, 281).

C. scutellare B. & C.
On *Magnolia Fraseri*, *Sambucus Canadensis* and *Pinus Virginiana*, Aug. 18, 1893 (*Nuttall*, 1176, 144).

ASTEROSTOMA Massee.

A. corticolum Massee.
On wild vine *Vitis* sp., in pine woods, alt. 2,000 ft., Feb. 1893 (*Nuttall*, 1000).

A. cervicolor (B. & C.) Massee.
On bark of living *Quercus* sp., Short Creek, alt. 1,800 ft. (*Nuttall*, 1325, 282).

PENIOPHORA Cooke.

P. quercina (Fr.) Cooke.
On *Castanea dentata*, Jan. 18, 1893 (*Nuttall*, 1346, 305).

P. cinerea (Fr.) Cooke.
On dead limb, March 1893 (*Nuttall*, 945, 170).

CONIOPHORA DC.

C. ———— sp.
Near *C. submembranacea* (B. & Br.). On *Zea Mays*, Aug. 10, 1895 (*Nuttall*, 1846, 737).

C. olivacea (Fr.) Karst.
In dark place underside old railroad ties, Nov. 5, 1894 (*Nuttall*, 1750, 631).

EXOBASIDIUM Woron.

E. RHODODENDRI Cram.
Forming "cups" near the tips or margins of living leaves of *Rhododendron maximum*. Common in Grant and Tucker Counties. I understand from Prof. Peck that this is his first knowledge of the occurring of this species in North America (*Millspaugh*).

CLAVARIACEÆ.

CLAVARIA Vaill.

C. amethistina Bull.
On ground, June 20, 1893 (*Nuttall*, 993).

C. pyxidata Pers.
On rotten log, June 10, 1893 (*Nuttall*, 975).

C. formosa Pers.
On ground in laurel thicket, and deep woods, alt. 2,000 ft., July 9, 1893. Spores 12.5 x 5 μ (*Nuttall*, 1085).

C. FLACCIDA Fr.
On leaf mold, in deep woods, Grant Co., near Bayard (*Millspaugh*).

C. fusiformis Sowerb.
On low ground in open woods, alt. 2,000 ft., July 9, 1893 (*Nuttall*, 1086).

C. juncea Fr.
On leaf mold in bottom of dead hollow stump. Oct. 28, 1893 (*Nuttall*, 1232, 179).

C. mucida Pers.
On upper side dead wet logs, Oct. 20, 1893 (*Nuttall*, 1231, 178).

CALOCERA Fr.

C. viscosa (Pers.) Fr.
On bark of *Magnolia Fraseri*, Short Creek, alt. 1,800 ft., Feb. 8, 1894. Spores 12.5 x 4 μ (*Nuttall*, 1387, 354).

LACHNOCLADIUM Lev.

L. semivestitum B. & C.
On dead wet limbs, alt. 1,800 ft., Sept. 18, 1895. Three to five inches high (*Nuttall*, 1867, 753).

TREMELLINACEÆ.

HIRNEOLA Fr.

H. Auricula-Judæ (Linn.) Berk.
On damp sticks, June 15, 1893, Short Creek (*Nuttall*, 993).

EXIDIA Fr.

E. glandulosa (Bull) Fr.
On bark *Juglans cinerea*, alt. 2,000 ft., Feb. 20, 1893 (*Nuttall*, 946).

E. alba (Huds.) Bref.
On dead log, June 23, 1893 (*Nuttall*, 999).

ULOCOLLA Bref.

U. foliacea (Pers.) Bref.
On dead twig, Nov. 10, 1893. Spores + 12.5 x 6 to 7 μ (*Nuttall*, 1281).

TREMELLA Dill.

T. frondosa Fr.
On *Rhododendron maximum*, Dec. 16, 1893 (*Nuttall*, 1321).

T. aurantia Fr.
On bark *Pinus Virginiana*, alt. 2,000 ft., March 20, 1893 (*Nuttall*, 947).

T. intumescens Sm.?
On dead limbs *Hicoria* sp., Short Creek, Dec. 16, 1893. Spores 10 to 13 x 3 to 4 μ, curved (*Nuttall*, 1332).

T. virens Schwein.
On dead branch *Cornus florida*, Aug. 17, 1893 (*Nuttall*, 1155). Spores mostly 7 x 5 μ or round 7 μ diameter.

NÆMATELIA Fr.

N. nucleata (Schw.) Fr.
On *Aralia spinosa*, alt. 1,300 ft., Aug. 18, 1893 (*Nuttall*, 1174, 142). On *Magnolia Fraseri*.

DACRYOMYCES Nees.

D. _____ sp.
Of this form Mr. J. B. Ellis says: "It seems to be a Dacryomyces. I find the same thing here at Newfield, N. J., but have never been able to decide upon it, and though I have sent it to

various European mycologists, I have never received a definite opinion from them." The form occurs on oak limbs on ground, Dec. 1893; is of a bright orange-red color, with curved spores 7.5 to 10 x 4 μ (*Nuttall*, 1271, 217).

D. deliquescens (Bull.) Dub.

On underside dead rotten limb *Pinus Strobus*, Dec. 13, 1894 (*Nuttall*, 1770).

D. Syringæ (Schum.)?

On dead limbs of *Platanus occidentalis*, Nov. 10, 1895 (*Nuttall*, 1889).

D. stellatus Nees.

On clean dead wood *Tsuga Canadensis*, Dec. 20, 1893 (*Nuttall*, 1331).

D. corticioides Ell.

On decayed *Tsuga Canadensis*, Short Creek, alt. 1,750 ft., Dec. 16, 1893. Lemon yellow .25 cm. to 3.5 x 1.5 cm. Spores hyaline, nucleate 9 to 12.5 x 5 to 7 μ obliquely apiculate at one end (*Nuttall*, 1316, 271).

D. minor Peck?

On *Kalmia latifolia*, Short Creek, alt 1,800 ft., March, 1894. Spores 10 to 12 x 4 μ (*Nuttall*, 1532).

GUEPINIA Fr.

G. spathularia (Schw.) Fr.

On *Quercus* sp., Jan. 1, 1894. Spores uniseptate 10 x 4 μ (*Nuttall*, 1782).

HORMOMYCES Bon.

H. FRAGIFORMIS Cooke.

On bark dead *Fagus atropunicea*, Grant Co., near Bayard (*Millspaugh*). On dead wood, May 18, 1893 (*Nuttall*, 963). *Hypsilophora fragiformis* (Fr.) Lev.

Lichenes.

USNACEÆ.

RAMALINA Ach.

R. rigida (Pers.) Tuck.
On trees, alt. 2,000 ft. (*Nuttall*, 1060).

R. calcicaris fastigiata Fr.
On trees, alt. 2,000 ft. (*Nuttall*, 869).

R. miniuscula Nyl.
On *Acer saccharinum*, alt. 2,000 ft. (*Nuttall*, 1696).

CETRARIA Ach.

C. ciliaris (Ach.) Tuck.
On *Pinus Virginiana*, alt. 1,800 ft. (*Nuttall*, 861).

C. lacunosa Ach.
On *Pinus Virginiana*, alt. 1,806 ft. (*Nuttall*, 1053).

C. aurescens Tuck.
On *Rhododendron maximum*, alt. 1,850 ft. (*Nuttall*, 1050).

USNEA Ach.

U. BARBATA (L.) Fr.
Wirt Co., on old trees, common, Burning Springs. Randolph Co., on *Rhododendron maximum*, common, Cheat Bridge. Mercer Co., on oak twigs, Bluefield; and elsewhere about State, common on trees, rocks and old fence rails (*Millspaugh*). On trees, alt. 2,000 ft. (*Nuttall*, 819).

U. BARBATA FLORIDA Fr.
Mercer Co., on oak chips and twigs among dead leaves at Bluefield (*Millspaugh*). On trees, alt. 2,000 ft. (*Nuttall*, 859).

THELOSCHISTES Norm.

T. parietinus (Linn.) Norm.
On *Robinia Pseudacacia*, alt. 2,000 ft. (*Nuttall*, 1145).

T. concolor (Dicks.) Tuck
On *Robinia Pseudacacia*, alt. 2,000 ft. (*Nuttall*, 1144).

Host Index of the Fungi.*

ABIES BALSAMEA (L.) Miller.
Peridermium Balsameum.

ABUTILON ABUTILON (L.) Rusby. (*A. Avicenne* Gærtn.)
Macrosporium Abutilonis.

ACALYPHA VIRGINICA L.
Cercospora Acalyphæ.

ACER *sp.*
Daldinia concentrica.
Helminthosporium persistens.
Myxosporium seriatum.
Trametes ambigua.

ACER NEGUNDO L. (*Negundo aceroides* Mœnch.)
Ceganella Aceris.
Diplodia atrata.
Fusarium sarcochroum.
Phoma negundinicola ramicola.
Phyllosticta *sp.*
Tubercularia vulgaris.

ACER PENNSYLVANICUM L.
Botryodiplodia acerina.
Cytispora exasperans.
Phoma Pennsylvanica.
Phoma samararum.
Rhytisma punctatum.

ACER RUBRUM L.
Botryosphæria quercuum.
Bromella Ravenelii.
Ceganella Aceris.
Eutypella rugiella.
Libertella acerina?
Phyllosticta acericola.
Sphæronæma acerinum.
Steganosporium piriforme.
Valsa etherialis.
Valsa pauperata.

*Species habiting fallen twigs, bark, branches, trunks, logs, stumps and leaves; soil, ground, sand and rocks; and excrementitious and decaying vegetable and animal substances, etc., etc., are not included in this index.

ACER SACCHARINUM L. (*A. dasycarpum* Ehrh.)
Diaporthe Aceris.
Fomes applanatus.
Libertella acerina?
Phyllosticta acericola.
Scleroderris pallidula.
Stagonospora collapsa.
Valsa ceratophora.

ACER SACCHARUM Marsh. (*Acer saccharinum* Wang.)
Hypoxylon fuscum.
Pilacre Petersii.

ACTÆA ALBA (L.) Mill.
Urocystis Anemones.

Actinomeris squarrosa see VERBESINA ALTERNIFOLIA.

AESCULUS OCTANDRA HYBRIDA (DC.) Sarg. (*Ae. octandra purpurascens* Gr.)
Phyllosticta sphæropsidea.

AGARICUS *sp.*
Nyctalis asterophora.
Sporodinia Aspergillus.

AGRIMONIA STRIATA Michx. (*A. Eupatoria* L.)
Sphærotheca Humuli.
Uredo Agrimoniæ.

ALNUS RUGOSA (Ehrh.) Koch. (*A. serrulata* Willd.)
Cryptospora femoralis.
Diatrypella verruciformis.
Eutypella stellulata.
Glœoporus tremellosus.
Glœosporium Alni. *sp. nov.*
Glœosporium cylindrospermum.
Hypoxylon fuscum.
Phlebia radiata.
Valsa femoralis.

AMALANCHIER CANADENSIS (L.) Medic.
Dimerosporium Collinsii.

AMARANTHUS RETROFLEXUS L.
Cystopus Bliti.

Ampelopsis quinquefolia see PARTHENOCISSUS QUINQUEFOLIA.

AMYGDALUS PERSICA L. (*Prunus Persica* Bth. & Hook.)
Cytispora leucostoma.
Cytispora Persicæ.
Exoascus deformans.
Monilia fructigena.
Sterigmatocystis nigra.

Streptothryx atra.
Trichothecium roseum.
Valsa leucostoma.

ANEMONE VIRGINIANA L.
Puccinia Anemones-Virginiana.

Andromeda ligustrina see XOLISMA LIGUSTRINA.

ARALIA SPINOSA L.
Botryosphæria Araliæ.
Diaporthe Araliæ.
Eutypella densissima.
Haplosporella Araliæ.
Hypoderma commune.
Hypoxylon coccineum.
Lecanidion atratum.
Leptothyrium vulgare.
Macrosporium commune.
Nectria cinnabarina.
Nematella nucleata.
Phoma melaleuca.
Phyllosticta Araliæ.
Physarum sinuosum.
Stagonospora petiolorum.
Tubercularia vulgaris.
Valsa ambiens.
Vermicularia petiolorum.

ARCTIUM LAPPA L.
Phyllosticta Lappæ.
Vermicularia Arctii.

ARISÆMA TRIPHYLLUM (L.) Torr.
Uromyces Caladii.

ASCLEPIAS SYRIACA L. (*A. cornuti* Dec.)
Fusarium roseum.
Macrosporium asclepiadeum.
Phoma asclepiadea *sp. nov.*
Phoma *sp.*
Uromyces Howei.

ASIMINA TRILOBA (L.) Dunal.
Anthostoma micrœcium.
Cytispora carphosperma.
Dinemasporium hispidulum.
Dothiorella Asiminæ *sp. nov.*
Macrosporium olivaceum *sp. nov.*
Mucor Mucedo.
Phyllosticta Asiminæ.
Rosellina micrœcium.
Sphæropsis Asiminæ *sp. nov.*
Sphæropsis Asiminæ fructigena *var. nov.*

Tubercularia Asiminæ *sp. nov.*
Ustilago *sp.*
Valsa ambiens.

ASPARAGUS OFFICINALIS L.
Fusarium *sp.*
Gibberella Saubinettii.
Macrosporium commune.
Tilmadoche mutans.
Torula herbarum.
Vermicularia liliacearum.

Aspidium spinulosum see DRYOPTERIS SPINULOSA.

ASTER *sp.*
Thelephora sebacea.

ASTER CORDIFOLIUS L.
Coleosporium Sonchi.
Puccinia Asteris.
Septoria atro-purpurea.

ASTER INFIRMUS Mich.
Fusicladium *sp.*

AVENA SATIVA L.
Epicoccum neglectum.
Ustilago Avenæ lævis.
Ustilago segetum.

AZALEA VISCOSA L.
Sphærographum histricinum.
Pestalozzia Guepini.

BENZOIN BENZOIN (L.) Coulter. (*Lindera Benzoin* Meisn.)
Camorosporum Linderæ *sp. nov.*
Diaporthe sociata.
Diplodia Linderæ.
Phyllosticta lindericola.
Sphæropsis Linderæ.
Valsa Linderæ.

BETA VULGARIS L.
Cercospora beticola.

BETULA *sp.*
Corticium Petersii,
Hypoxylon atroviride?
Hypoxylon multiforme.
Polyporus pubescens.

BETULA LENTA L.
Gelatinosporum betulinum.
Hymenochæte corrugata.
Hymenochæte unicolor.
Polystictus hirsutus.

Poria tomento-cincta.
Septoria microsperma.
Stereum complicatum.
Stereum sericeum.
Stereum versicolor.

BETULA LUTEA Michx. f.
Discosia Artoceras.
Fomes fomentarius.
Lentinus strigosus.

BETULA NIGRA L.
Aposphæria pezizoides.
Cytispora betulina.
Glœosporium betularum.
Melanconium bicolor.
Steganosporium muricatum.

BOEHMERIA CYLINDRICA (L.) Willd.
Cercospora Boehmeriæ.

BOLETUS *sp.*
Sporodinia Aspergillus.

BRASSICA NIGRA (L.) Koch.
Cystopus candidus.
Septoria Brassicæ *sp. nov.*

BRASSICA OLERACEA L.
Botrytis vulgaris.

CARDUUS LANCEOLATUS L.
Puccinia Hieracii.
Puccinia suaveolens.

CALOPTENUS FEMUR RUBRUM (*grasshopper*).
Bacterium *sp.*
Empusa Grylli.

CAREX *sp.*
Puccinia Caricis.

CAREX FRASERI And.
Botrytis torta.
Epidochium melanochlorum?
Stachylidium caricinum.
Trichægum nodulosum.
Zygodesmus graminicola.

CARPINUS CAROLINIANA Walt.
Cytispora leucosperma.
Glœosporium Robergei.
Radulum orbiculare.
Thyrsidium hedericolum Carpini.
Xylaria flabelliformis.

Carya sp., see HIKORIA *sp.*

CASSIA MARILANDIA L.
Vermicularia Dematium.

CASTANEA DENTATA (Marsh.) Sudw. (*C. sativa Americana* Sarg.)
Coryneum pustulatum.
Cryptospora cinctula.
Diatrype Stigma.
Discosia Artoceras.
Glonium parvulum.
Lenzites corrugata.
Leptothyrium Castanæ.
Melanconis modonia.
Microsphæria Alni.
Mucronoporus Gilbus.
Peniophora quercina.
Phyllactinia suffulta.
Septoria ochroleuca.
Sphærella maculiformis.
Steganosporium Castanæ.
Stereum versiforme.
Valsa coronata.

CASTANEA PUMILA Mill.
Phyllosticta Castanæ.

CATALPA CATALPA (L.) Karst. (*Catalpa Bignonioides* Walt.)
Epicoccum neglectum.
Microsphæria elevata.
Phyllosticta Catalpæ.

CATERPILLARS.
Empusa Grylli.

CAULOPHYLLUM THALICTROIDES (L.) Michx.
Cercospora Caulophylli.
Diaporthe Gladioli?
Vermicularia compacta.

CELASTRUS SCANDENS L
Botryosphæria Hibiscii *var.*
Phyllosticta Celastri *sp. nov.*
Ramularia Celastri.
Sphæropsis celastrina.
Tubercularia Celastri.

CELTIS OCCIDENTALIS L.
Cytispora Celtidis.
Haplosporella Celtidis.
Macrosporium antennæforme.
Phyllosticta Celtidis.
Tubercularia hamata.

CEPHALANTHUS OCCIDENTALIS L.
Discosia Artoceras.

CERCIS CANADENSIS L.
Cytispora *sp.*
Diplodia Cercidis.
Glœosporium *sp.*
Phyllosticta cercidicola *sp nov.*
Sarcinella heterospora.

CHENOPODIUM ALBUM VIRIDE (L.) Moq.
Cercospora dubia.

CHENOPODIUM ANTHELMINTICUM L.
Cercospora anthelmintica.
Pyrenophora calvescens.

CHIONANTHUS VIRGINICA L.
Botryosphæria pyriospora.
Cercospora Chionanthi *sp. nov.*
Cytispora *sp.*
Dermatea Chionanthi.
Phyllosticta Chionanthi.
Stagonospora *sp.*
Valsa Chionanthi.

CICUTA MACULATA L.
Botrytis oleracea.
Macrosporium commune.

CIMICIFUGA RACEMOSA (L.) Nutt.
Leptosphæria Ogilviensis.

CLEMATIS VIRGINIANA L.
Ascochyta clematidina.

CLINTONIA UMBELLULATA (Michx.) Torr
Vermicularia liliacearum.

Cnicus lanceolatus Willd see CARDUUS LANCEOLATUS L.

CONVOLVULUS REPENS L. (*Calystegia sepium repens* Gray.)
Puccinia Convolvuli.
Puccinia Convolvuli *var.*

CORNUS ALTERNIFOLIA L.f.
Septoria cornicola.

CORNUS FLORIDA L.
Aschersonia *sp.*
Dædalia confragosa.
Discosia Artoceras.
Phyllosticta cornicola.
Phyllosticta globifera *sp. nov.*
Septoria Corni-Maris.
Sporodesmium toruloides.
Tremella virens.
Valsa ambiens.

CORYLUS AMERICANA Walt.
Gnomoniella Coryli.

CRATEGUS *sp.*
Aspergillus glaucus.
Cylindrosporium Cratægi.
Gymnosporangium clavariiforme (*Aecid.*)

CRATEGUS OXYACANTHA L.
Podosphæria Oxyacanthæ.

CUNILA ORIGANOIDES (L.) Britton. (*C. Mariana* L.)
Puccinia Menthæ.

Cuphæa petiolata see PARSONSIA PETIOLATA.

DATURA STRAMONIUM L.
Macrosporium sp.

DENDROCTONUS FRONTALIS (*Insect.*)
Cylindrocolla Dendroctoni.

DENTARIA DIPHYLLA Michx.
Cystopus candidus.

Desmodium paniculatum see MEIBOMIA PANICULATA.

Desmodium canescens see MEIBOMIA CANESCENS.

DIANTHUS AMERICANA L.
Cercospora Diantheræ.

Diarrhena Americana see KORYCARPUS DIANDRUS.

DIOSCOREA VILLOSA L.
Phyllosticta Dioscoreæ.
Leptothyrium vulgare.

DIOSPYROS VIRGINIANA L.
Fusarium roseum *var.*
Macrosporium *sp.*
Podosphæria Oxyacanthæ.
Valsa Diospyri.

DISPORUM LANUGINOSUM (L.) Morong.
Discosia maculicola.

DRYOPTERIS SPINULOSA (Retz.) Kuntze. (*Aspidium spinulosum* Sw.)
Leocarpus fragilis.
Leptostromella filicina.

ELYMUS CANADENSIS GLAUCIFOLIUS (Willd.) Torr.
Phyllachora graminis.

EPIGÆA REPENS L.
Discosia Artoceras.
Erysiphe Vaccinii.

EQUISETUM ARVENSE L.
Septosporium Equiseti.

ERECHTITES HIERACIFOLIA (L.) Raf.
Sphærotheca Castagnei.

EUPATORIUM AGERATOIDES L.
Cercospora ageratoides.
Erysiphe communis.
Puccinia tenuis.

EUPATORIUM CŒLESTINUM L.
Puccinia conoclinii.

EUPATORIUM PURPUREUM L.
Oidium erysiphoides.
Erysiphe Cichoracearum.

FAGUS ATROPUNICEA (Marsh.) Sudw. (*F. ferruginea* Ait.)
Coryne urnalis.
Cryptosporella compta.
Horomyces fragiformis.
Hydnum coralloides.
Hydnum Erinaceus.
Lachnea scutellata.
Libertella faginea.
Microsphæria erineophila.
Polystictus hirsutus.
Scorias spongiosa.

FRAGARIA *cult.*
Phoma obscurans.
Ramularia Tulasnei.
Septoria aciculosa.

FRAXINUS *sp.*
Aposphæria pezizoides.

FRAXINUS AMERICANA L.
Cucurbitaria Fraxini.
Diplodia infuscans.
Diplodia inquinans.
Fomes applanatus.
Hemiarcyria rubiformis.
Hypholoma sublateritium.
Sphærographum Fraxini.
Sphæropsis phomatella.

FRAXINUS PENNSYLVANICA Mart. (*F. pubescens* Lam.)
Cytispora ceratophora.
Discosia Artoceras.
Glœosporium aridum.

GALAX APHYLLA L.
Asterina Leemingii.
Dimerosporium Galactis.
Phyllosticta Galacis.

GALIUM CIRCÆZANS Michx.
Septoria pilostega.

GAULTHERIA PROCUMBENS L.
Hypocrea tenerrima.
Sphærella Gaultheriæ.

GENTIANA ANDREWSII Griesb.
Phyllosticta gentianicola.

GEUM CANADENSE Jacq. (*G. album* Gm.)
Pestalozzia *sp.*
Phyllosticta *sp.*

Halesia tetraptera see MOHRODENDRON CAROLINUM.

HAMAMELIS VIRGINICA L.
Corticium leve.
Gonatobotryum maculiocolum.
Lecanidion Hamamelidis.
Leptosphæria Doliolum.
Phyllosticta Hamamelidis.
Phyllosticta sphæropsidea.

HELIANTHUS DECAPETALUS L.
Cylindrocolla flagellaris *sp. nov.*
Puccinia Helianthi.
Septoria Helianthi.

HEUCHERA AMERICANA L.
Septoria Saxifragæ.
Vermicularia Dematium.

HICORIA *sp.*
Corticium lilacino-fuscum.
Scoriomyces Cragini.
Sphæropsis Caryæ.
Tremella intumescens.

HICORIA MICROCARPA (Nutt.) Britton. (*Carya microcarpa.*)
Phyllosticta caryiogena.

HICORIA MINIMA (Marsh.) Britton. (*Carya amara.*)
Valsa ceratophora.

HICORIA OVATA (Mill.) Britton. (*Carya alba.*)
Corticium subgiganteum.
Cytispora caryiogena.
Dædalia unicolor.
Diplodia caryiogena.
Melanoconium pallidum.
Myxosporium luteum.
Phyllosticta caryiogena.
Polyporus adustus.
Tilmadoche gyrocephala.
Trichoderma lignorum.

HOLCUS LANATUS L.
Puccinia coronata.

HOUSTONIA CÆRULEA L.
Æcidium Houstonianum.

HOUSTONIA LONGIFOLIA Gærtn.
Æcidium Houstonianum.

HYDNUM *sp.*
Pencillium glaucum.
Stremonites fusca.

HYDRANGEA ARBORESCENS L.
Diaporthe Hydrangæ *sp. nov.*
Hypoderma commune.
Leptosphæria vagabunda.
Tilmadoche gyrocephala.

HYMENOCETUM sp.
Hypomyces rosellus.

HYPERICUM MUTILUM L.
Uromyces Hyperici.

HYPOXYLON COCCINEUM Bull.
Lasiosphæria ovina.

HYPOXYLON RUBIGINOSUM.
Isaria Virginiensis.

HYSTERIX HYSTERIX (L.) Millsp.
Phyllachora graminis.

ILEX OPACA Ait.
Diaporthe cercophora.
Diplodia ilicicola.
Fusicoccum ilicinum.
Heliscus Lugdunensis.
Hypoxylon perforatum.
Leptothyrium foraminulatum.
Leptothyrium *sp.*
Phoma ilicicola.
Phyllosticta opaca *sp. nov.*
Physalospora Ilicis.
Pilacre Petersii.

ILEX VERTICILLATA (L.) Gray.
Phyllosticta Hynaldi.
Rhytisma Prini.
Trichothecium roseum.

IMPATIENS BIFLORA Walt. (*I. fulva.*)
Septoria Nolitangere.
Æcidium Impatientis.

IPOMŒA PANDURATA (L.) Meyer.
Botrytis vulgaris.
Coleosporium Ipomœæ
Pestalozzia funerea.
Phlyctæna Ipomœæ.
Phyllosticta Ipomœæ.
Sphæropsis Ipomœæ.

IRIS CRISTATA Ait.
Vermicularia liliacearum.

JUGLANS CINEREA L.
Dasycypha virginea.
Diplodia Juglandis.
Exidia glandulosa.
Glonium simulans.
Lasiosphæria ovina.
Marsonia Juglandis.
Melanconium oblongum.
Mucronoporus ferruginosus.
Orbilia coccinella.
Propolis Faginea.
Pseudohelotium fibrisedum.
Sphæronæma infuscans *sp. nov.*
Tapesia fusca.
Tapesia sanguinea.
Valsaria exasperans.

JUNIPERUS VIRGINIANA L.
Gymnosporangium juniperinum (*Teleuto.*)
Gymnosporangium macropus.

KALMIA LATIFOLIA L.
Cercospora Kalmiæ.
Dacryomyces minor.
Hymenochæte unicolor.
Hypocreopsis riccoidea.
Hysterium Kalmiæ?
Poria sinuosa.
Rhabdospora Kalmianum.
Septoria kalmiæcola.

KORYCARPUS DIANDRUS (Michx.) Kuntze. (*Diarrhena Americana.*)
Phyllachora Caricis.

LACHNOCLADIUM SEMIVESTITUM.
Aspergillus flavus.
Aspergillus glaucus oblongisporus *var. nov.*

LACTUCA CANADENSIS L.
Botryosporium pulchrum.
Bremia Lactucæ.

LACTUCA HIRSUTA Muhl.
Bremia Lactucæ.

LESPEDEZA VIOLACEA (L.) Pers.
Uromyces Lespedezæ.

Lindera Benzoin see BENZOIN BENZOIN.

LIQUIDAMBAR STYRACIFLUA L.
Aposphæria pezizoides.
Cytispora *sp.*
Grandinia crustosa.
Lophiotrema Nucula.
Monilia aureo-fulva.
Propolis faginea.
Trichia proximella.

LIRIODENDRON TULIPIFERA L.
Dendrodochium rubellum microsporum.
Dothiorella minor *sp. nov.*
Diplodia Liriodendri.
Eurotium herbariorum.
Erysiphe Liriodendri.
Leptothyrium Liriodendri.
Orbilia rubella.
Propolis faginea.
Phoma mixta.
Phyllosticta liriodendrica.
Phyllosticta macrospora.
Polystictus hirsutus.
Poria corticola.
Poria Tulipiferæ
Tubercularia vulgaris.
Valsa albopuncta *sp. nov.*

LOBELIA CARDINALIS L.
Septoria Lobeliæ.

LYCOPERSICUM ESCULENTUM L.
Fusarium Solani.
Macrosporium Tomato.

MAGNOLIA ACUMINATA L.
Dendrodochium rubellum microsporum.
Massaria Magnoliæ *sp nov.*
Phyllosticta Cookei.
Sphæronæma Magnoliæ.

MAGNOLIA FRASERI Walt.
Bombardia fasciculata.
Botrytis vulgare.
Calocera viscosa.
Cladosporium *sp.*
Collybia conigenoides.
Corticium leptaleum.
Corticium scutellare.
Diatrype platystoma.

Diatrypella verruciformis.
Discosia Artocreas.
Exidia glandulosa.
Helminthosporium macrocarpon.
Helminthosporium septemseptatum.
Hemiarcyria stipata.
Holwaya ophiobolus.
Hymenochæte corrugata.
Hypoxylon Howeanum.
Hypoxylon Nuttallii *sp. nov.*
Hypoxylon perforatum.
Irpex obliquus.
Kneiffia setigera.
Lachnella Virginica.
Leptothyrium petiolorum *var.*
Lycogala epidendrum.
Melanomma Pulvis-pyrius.
Nectria coccinea.
Nectria ditissima.
Nematella nucleata.
Orbilia Xanthostigma.
Peniophora cinerea.
Phlebia merismoides.
Phyllactinia suffulta.
Phoma pedunculi.
Physarum psittacinum.
Pilacre Petersii.
Polyporus *sp.*
Polyporus brunalis.
Poria ferruginosa.
Poria spissa.
Poria tomento-cincta.
Radulum Magnoliæ.
Stagonospora pedunculi.
Stilbum magnum.
Tapesia sanguinea.
Tilmadoche nutans.
Tilmadoche viridis.
Vermicularia subeffigurata.
Xylaria corniformis.

MEIBOMIA CANESCENS (L.) Kuntze. (*Desmodium canescens.*)
Uromyces Hedysari-paniculati.

MEIBOMIA PANICULATA (L.) Kuntze. (*Desmodium paniculatum.*)
Uromyces Hedysari-paniculati.

MENISPERMUM CANADENSE L.
Cercospora Menispermi.
Cladosporium herbarum.
Sphæropsis Menispermi.

MOHRODENDRON CAROLINUM (L.) Britton. (*Halesia tetraptera.*)
Cytispora Halesiæ.
Diaporthe Halesiæ.
Diaporthe Tetrapteræ.
Sirococcus Halesiæ.

MORUS RUBRA L.
Tubercularia *sp.*

MOSS.
Hypocrea tenerrima.
Lycoperdon pedicellatum.
Physarum citrinum.

Nasturtium Armoracia (L.) Fr. see RORIPA ARMORACIA.

NECTRIA VERRUCOSA.
Tubercularia *sp.*

Negundo aceroides see ACER NEGUNDO.

NYSSA AQUATICA L. (*N. sylvatica.*)
Phoma Nyssocarpa.
Sphærella nyssæcola.
Valsa Nyssæ.
Valsa præstans.

Œnothera biennis see next.

ONAGRA BIENNIS (L.) Scop. (*Œnothera biennis.*)
Cercospora Œnotheræ.
Leptothyrium Vulgare.
Phlyctæna arcuata.
Phlyctæna vagabunda.
Phoma herbarum.
Sphæronæma corneum.
Sphæropsis Œnotheræ *sp. nov.*
Vermicularia *sp.*

OPULASTER OPULIFOLIUS (L.) Kuntze. (*Physocarpus opulifolius.*)
Botryosphæria Quercuum.
Didymella Physocarpi.
Pestalozzia Jefferisii.
Phoma *sp.*
Phoma leucostoma.
Phoma Spirææ.
Sphæronæma Physocarpi.
Sphæropsis Physocarpi.
Sporodesmium moriformе.
Stagonospora Physocarpi.

ORANGE (*decaying.*)
Oospora fasciculata.

OSMORRHIZA CLAYTONII. (Michx.) B.S.P.
Puccinia Pimpinellæ.

OSTRYA VIRGINIANA (Mill.) Willd.
Thelephora pedicellata.
Corticium Oakesii.

OXALIS STRICTA L. (*O. corniculata stricta.*)
Microsphæria Russellii.

OXYDENDRON ARBOREUM (L.) DC.
Discosia maculicola.
Phyllosticta Oxydendri *sp. nov.*
Scleroderris pallidula.
Tympanis Oxydendri.

PARTHENOCISSUS QUINQUEFOLIA (L.) Planch. (*Ampelopsis quinquefolia.*)
Botryosphæria Quercuum.
Cercospora Ampelopsidis.
Coniothryum Fuckelii.
Periconia pycnospora.
Phyllosticta Ampelopsidis.
Sphæropsis Ampelopsidis.
Uncinula Ampelopsidis.

PESTALOZZIA GUEPINI.
Dermatea lobata.

PHASEOLUS VULGARIS L.
Cercospora columnaris.
Colletotrichum Lindemuthianum.
Uromyces appendiculatus.

PHLOX AMŒNA Sims.
Cercospora omphacodes.
Vermicularia phlogina.

PHRYMA LEPTOSTACHYA L.
Septoria Leptostachyæ.

Physocarpus opulifolius see OPULASTER OPULIFOLIUS.

PHYLLOSTICTA CARYIOGENA.
Discosia rugulosa.

PHYTOLACCA DECANDRA L.
Diaporthe aculeata.
Leptosphæria clavigera.
Macrosporium caudatum.
Periconia pycnospora.
Phlyctæna septorioides.
Phlyctæna vagabunda.
Phoma Phytolaccæ.

PICEA MARIANA (Mill.) BSP.
Fomes carneus.

Lenzites sepiaria.
Polystictus versicolor.
Scleroderma vulgare.

PINUS ECHINATA Mill. (*P. mitis.*)
Coleosporium Senecionis (*Æcid.*)
Hyphoderma Desmazieri.

PINUS RIGIDA Mill.
Amphisphæria pinicola.
Dasycypha Ellisiana.
Lophiodermium pinastri.
Pleosphæria corticola.
Stictis fimbriata.

PINUS STROBUS Linn.
Dacryomyces deliquescens.

PINUS VIRGINIANA Mill. (*P. inops.*)
Amphisphæria pinicola.
Botryosphæria Quercuum.
Corticium scutellare.
Cytispora Curreyi.
Fomes volvatus.
Mollisia pinastri.
Polystictus abietinus.
Poria Xantha.
Rosellina abietina trichota.
Speira minor.
Stictis fimbriata.
Stereum Pini.
Tremella aurantia.

PLATANUS OCCIDENTALIS L.
Aposphæria pezizoides.
Cytispora Platani.
Dacryomyces Syringæ.
Dendrophoma Therryana.
Eutypella Platani.
Glœosporium nervisequum.
Helminthosporium macrocarpon.
Hendersonia Desmazieri.
Myxosporium platanicolum.
Phoma scabra.
Rosellinia millegrana.
Stilbum flavipes.

POA PRATENSIS L.
Erysiphe graminis.
Oidium monilioides.

PODOPHYLLUM PELTATUM L.
Puccinia Podophylli.

POLYGONATUM BIFLORUM (Walt.) Ell.
Cladosporium herbarum.

POLYGONUM AVICULARE L.
Cercospora avicularis.

POLYGONUM ERECTUM L.
Uromyces Polygoni.

POLYGONUM HYDROPIPER L.
Septoria Polygonorum.

POLYMNIA UVEDALIA L.
Helotium herbarum.
Leptosphæria Doliolum.
Macrosporium *sp.*
Periconia pycnospora.
Pleurotus cyphelliformis.
Septoria Polymnæ.

POLYPORUS PERGAMENUS.
Calicium tigillare.
Cephalothecium roseum.

POLYPORUS VARIUS Fr.
Cladosporium epimyces.
Pencillium glaucum.

POLYSTICTUS VERSICOLOR.
Dactylium dendroides.

PORIA SPISSA.
Orbilia vinosa.

PORTULACCA OLERACEA L.
Cystopus Portulacæ.

POTENTILLA CANADENSIS L.
Phragmidium Potentillæ (*Uredo.*)

POTENTILLA MONSPELIENSIS L. (*P. Norvegica.*)
Mollisia Dehnii.

PRENANTHES SERPENTARIA Pursh.
Septoria Nabali.

PRUNUS *cult.* "Cherry."
Libertella faginea.
Monilia fructigena.
Plowrightia morbosa.
Podosphæria Oxyacanthæ.
Podosphæria tridactyla.
Polystictus cinnabarinus.
Volutella ciliata.

PRUNUS DOMESTICA L.
Cytispora leucostoma.

Exoascus Pruni.
Monilia fructigena.
Plowrightia morbosa.

Prunus Persica see AMYGDALUS PERSICA.

PRUNUS SEROTINA Ehrh.
Merulius ambiguus.
Polyporus nidulans.
Poria vaporaria.
Sphæropsis cerasina.

PYRUS COMMUNIS L.
Entomosporium maculatum.
Micrococcus amylovorus.

PYRUS CORONARIA L.
Gymnosporangium macropus (*Æcid.*)
Plowrightia morbosa

PYRUS MALUS L.
Fusicladium dendriticum,
Phyllosticta Pirina.
Polystictus hirsutus.
Schizophyllum commune.

QUERCUS *sp.*
Asterostoma cervicolor.
Botryosphæria Quercuum.
Chlorosplenium Schweinitzii.
Cryptospora trichospora.
Guepinia spathularia.
Hemiarcyria clavata.
Hypoxylon atroviride?
Hypoxylon stigmatum.
Nummularia punctulata.
Rosellinia corticium.
Stereum pustulosum.
Stereum versicolor.

QUERCUS ALBA L.
Bactridium flavum.
Coryne urnalis.
Fomes applanatus.
Hemiarcyria rubiformis.
Hemiarcyria clavata.
Lachnella erinaceus.
Lachnea scutellata.
Marsonia Martini.
Merulius tremellosus.
Merulius rubellus.
Phyllosticta phomiformis.
Polystictus versicolor.
Schizophyllum commune.
Stereum sulphuratum.

QUERCUS PALUSTRIS DuRoi.
Erysiphe quercina.
Fomes applanatus.
Lycoperdon pyriforme.
Trichopeziza capitata.

QUERCUS PRINUS L.
Botryodiplodia *sp.*
Cyathicula quisquillaris.
Marsonia Martini.
Phyllosticta phomiformis.
Phyllosticta Quercus-Prini.
Polyscytalum sericeum.
Pseudovalsa sigmoidea.
Stereum complicatum.

QUERCUS RUBRA L.
Fomes applanatus.
Leptothyrium dryinum.

QUERCUS VELUTINA Lam. (*Q. tinctoria.*)
Marsonia Martini.

RESEDA ODORATA L.
Cladosporium herbarum fasciculare.
Pyrenopeziza lacerta.

RHODODENDRON CATAWBIENSE Michx.
Pestalozzia Guepini.

RHODODENDRON MAXIMUM L.
Exobasidium Rhodedendri.
Grandinia crustosa.
Heliotium castaneum.
Hypocrea Virginiensis.
Hypoxylon colliculosum.
Lophiodermium Rhododendri.
Pestalozzia Guepini.
Sporocybe Azaleæ.
Stereum triste.
Tremella frondosa.

RHUS COPALLINA L.
Aponectria inaurata.
Calospora aculeans.
Polyporus pocula.
Sporocybe Rhois.
Stereum sericeum.

RHUS HIRTA (L.) Sudw. (*R. typhina*)
Calospora aculeans.
Calospora Rhoina.
Cladosporium herbarum.
Cytispora Rhoina.
Cytispora Rhois-hirtæ *sp. nov.*

Irpex lacteus.
Myxosporium Rhois.
Polyporus adustus.
Sphæropsis Sumachi.
Sporocybe Rhois.
Torula dimidiata.
Tubercularia vulgaris.

RHUS RADICANS L. (*R. toxicodendron.*)
Cylindrosporium Toxicodendri.
Macrosporium commune.
Pestalozzia Toxica.
Phyllosticta roicola.
Uromyces Terebinthi.
Vermicularia Toxica *sp. nov.*

RIBES *cult.*
Phyllosticta Ribis *sp. nov.*

ROBINIA PSEUDACACIA L.
Cladosporium epiphyllum.
Cladosporium nigrellum.
Cucurbitaria elongata.
Cytispora coccinea.
Cytispora orthospora.
Diaporthe oncostoma.
Dothiorella glandulosa.
Epicoccum Duriæanum.
Eutypella stellulata.
Fomes rimosus.
Hypoxylon rubiginosum.
Libertella *sp.*
Nectria ditissima.
Rosellinia subiculata.
Tubercularia vulgaris.
Vermicularia petiolorum.

RORIPA ARMORACIA (L.) Hitch. (*Nasturtium Armoracia.*)
Cercospora Armoraciæ.

ROSA *cult.*
Actinonema Rosæ.
Oidium leucoconium.

ROSA HUMILIS Marsh.
Phragmidium subcorticium.
Phyllosticta Rosæ.

RUBUS BAILEYANUS Britt. (*R. villosus humifusus.*)
Hypoderma virgultorum.
Scleroderris rhabarbarina.

RUBUS CANADENSIS L.
Cercospora Rubi.

Cercospora septorioides *sp. nov.*
Phyllosticta *sp.*
Septoria Rubi.

RUBUS *culi.*
Botryosphæria Quercuum *var.*
Diplodia Rubi.
Hainesia Rubi.

RUBUS HISPIDUS L.
Uredo (*Cæoma*) nitens.

RUBUS ODORATUS L.
Diaporthe rostellata.
Oidium erysiphoides.
Pericornia pycnospora.
Pyrenopeziza lacerata.
Vermicularia compacta.

RUBUS STRIGOSUS Michx.
Glœosporium rubicolum *sp. nov.*
Glœosporium venetum

RUBUS VILLOSOS Ait.
Diaporthe obscura.
Teichospora nitida.
Uredo (*Cæoma*) nitens.

RUMEX ACETOSELLA L.
Coniosporium harknessioides.

RUMEX OBTUSIFOLIUS L.
Glœosporium Rumicis *sp. nov.*
Macrosporium commune.

SALIX NIGRA Marsh.
Corticium salicinum.
Cytispora Salicis.
Diplodia Salicina.
Melampsora farinosa.
Trimmatostroma Americana.

SALIX NIGRA FALCATA Torr.
Aposphæria pezizoides.
Hendersonia Lirella.
Lophidium compressum.

SAMBUCUS CANADENSIS L.
Cercospora despazeoides.
Corticium scutellare.
Microsphæria Grossulariæ.
Phyllosticta Sambuci.

SAMBUCUS PUBENS Michx. (*S. racemosus.*)
Tubercularia Sambuci.
Tubercularia vulgaris.

SANGUINARIA CANADENSIS L.
Glœosporium Sanguinariæ.
Phyllosticta Sanguinariæ

SAPONARIA OFFICINALIS L.
Macrosporium Saponariæ.

SASSAFRAS SASSAFRAS (L.) Karst. (*S. officinale.*)
Athostoma microplacum.
Colletotrichum *sp.*
Cytispora Sassafras *sp. nov.*
Discosia Artoceras.
Glonium stellatum.
Hypoxylon Sassafras.
Phyllosticta Sassafras.
Sphæropsis Sassafras.
Valsa subclypeata.

SCLERODERMA VULGARE.
Boletus parasiticus.

SCROPHULARIA MARILANDICA L.
Septoria Scrophulariæ.

Smilacina racemosa see VAGNERA RACEMOSA.

SMILAX *sp.*
Myicoporon Smilacis.

SMILAX GLAUCA Walt.
Cercospora smilacina.
Puccinia Smilacis (*Uredo.*)

SMILAX ROTUNDIFOLIA L.
Cercospora Smilacis.
Discosia maculicola.
Phoma smilacina.
Phyllosticta Smilacis subeffusa.

SOLANUM TUBEROSUM L.
Phytophthora infestans.

SOLIDAGO CANADENSIS L.
Coleosporium Solidaginis.

SPERGULA ARVENSIS L.
Peronospora obovata.

SPHÆROPSIS ASIMINÆ.
Macrosporium olivaceum.

STEREUM *sp.*
Hypomyces aurantinus.

TARAXACUM TARAXACUM(L.) Karst. (*Taraxacum officinale* Web.)
Puccinia Hieracii.
Ramularia Taraxaci.

TECOMA RADICANS (L.) DC.
Physalospora *sp.*
Septoria Tecomæ.

THALICTRUM POLYGAMUM Muhl.
Leptostroma vulgare.

TIARELLA CORDIFOLIA L.
Puccinia Heuchera.

TILIA HETEROPHYLLA Vent.
Hercospora Tiliæ.

TILIA AMERICANA L.
Phyllosticta Tiliæ.

TRAUTVETTERIA CAROLINENSIS (Walt.) Vail. (*T. palamata.*)
Botrytis vulgaris.
Pericornia *sp.*
Sarcinella heterospora.
Septoria Trautvetteriæ.
Vermicularia *sp.*

TRIFOLIUM PRATENSE L.
Uromyces Trifolii.

TRIFOLIUM REPENS L.
Polythrincium Trifolii.

TRIOSTEUM PERFOLIATUM L.
Cladosporium Triostei.

TRITICUM VULGARE L.
Fusarium culmorum.
Hymenula cerealis.
Puccinia Rubigo-vera.
Tilletia Tritici.
Ustilago segetum.

TSUGA CANADENSIS Carr.
Coryneum cupulatum.
Corticium albo-flavescens.
Corticium ochraceum.
Cytispora Curreyi.
Dacryomyces stellatus.
Dacryomyces corticioides.
Fomes lucidus.
Fomes pinicola.
Lenzites abietina.
Lenzites sepiaria *forma.*
Leocarpus fragilis.
Lindbaldia effusa.
Merulius Molluscus.
Microcera [illegible]mpens.
Odontia farinaceum.

Otidea onotica ochracea.
Panus dorsalis.
Peridermium Peckii.
Polystictus abietinus.
Sphærella conicola
Sporodesmium *sp.*
Stereum sangiunolentum.
Tapesia fusca.
Tremellodon gelatinosum.
Valsa Abietis.

ULMUS PUBESCENS Walt. (*U. fulva.*)
Corticium incarnatum.
Dothidella Ulmiæ.
Mucronoporus Everhartii.
Nectria vulpinia?
Phyllosticta Ulmi?

UREDO (*Cæoma*) NITENS.
Tuberculina persicina.

VAGNERA RACEMOSA (L.) Morong. (*Smilacina racemosa.*)
Septoria Smilaciniæ.
Vermicularia liliacearum.

VERBENA URTICÆFOLIA L.
Septoria Verbenæ.

VERNONIA NOVEBORACENSIS (L.) Willd.
Cercospora oculata.
Cercospora Vernoniæ.
Coleosporium Sonchi.
Coleosporium Vernoniæ.
Ophiobolus porphyrogonus.
Ophiobolus fulgidus.
Phlyctæna vagabunda.

VIOLA BLANDA Willd.
Puccinia Violæ (*Uredo.*)

VIOLA HASTATA Michx.
Puccinia Violæ (*Æcid.*)

VIOLA OBLIQUA Hill. (*V. cucullata.*)
Cercospora granuliformis.
Cercospora Violæ.

VIOLA PRIMULÆFOLIA L.
Septoria hyalina.

VIOLA ROTUNDIFOLIA Michx.
Puccinia Violæ (*Uredo.*)

VIOLA SAGITTATA Ait.
Septoria Violæ.

VITIS *sp.*
Asterostoma corticolum.
Botryosphæria Quercuum.
Corticium Petersii.
Diplodia viticola.
Phialea virgultorum.
Valsa Vitis.

VITIS ÆSTIVALIS Michx.
Phyllosticta Labruscæ.

VITIS CORDIFOLIA Michx.
Phyllosticta Labruscæ.
Saccidium Vitis *sp. nov.*
Uncinula Americana.

VITIS *cult.* "Concord."
Dermatella viticola.
Lophidium nitidum.
Phoma uvicola.
Phyllosticta Labruscæ.
Uncinula Ampelopsidis.

VITIS LABRUSCA L.
Plasmopara viticola.

VITIS RUPESTRIS Scheele.
Phyllosticta Labruscæ.
Trematosphæria vitigena *sp. nov.*

WEEDS (*in shade.*)
Arcyria cinerea.

XANTHIUM CANADENSE Mill.
Botrytis vulgaris.
Erysiphe Cichoracearum.

XANTHORRHIZA APIIFOLIA L'Her.
Phyllosticta Xanthorrhizæ *sp. nov.*
Vermicularia Dematium.

XOLISMA LIGUSTRINA (L.) Britton. (*Andromeda ligustrina.*)
Rhytisma decolorans.

YUCCA FILAMENTOSA L.
Coniothyrum concentricum.
Macrosporium caudatum.
Vermicularia subeffigurata scapincola.

ZEA MAYS L.
Colletotrichum lineola.
Coniophora *sp.*
Diplodia Maydis.
Helminthosporium folliculatum.
Leptosphæria orthogramma.

Macrosporium Maydis.
Ophiobolus acuminatus.
Puccinia Sorghi (*Teleut.*)
Ustilago Maydis.

ZIZIA CORDATA (Walt.) DC.
Oidium erysiphoides.

Local Plant Names.*

Bee-weed	Aster Lowrieanus
Blue Devil	Echium vulgare
Blue-stem	Echium vulgare
Blue Thistle	Echium vulgare
Blue-weed	Echium vulgare
Blister Pine	Abies balsamea
Broom Sedge	Andropogon scoparius
Buck-horn Plantain	Plantago lanceolata
Bull's-eye	Chrysanthemum Leucanthemum
Catawba	Catalpa Catalpa
Colic-root	Asarum Canadense
Coon-root	Sanguinaria Canadensis
Crowd-weed	Brassica sinapistrum. Lepidium campestre
Cuckle-burr	Xanthium Canadense
Cut-paper	Papirius papyrifera
Deer's-tongue	Panicum clandestinum
Devil's Flax	Linaria vulgaris
Devil's Grandmother	Elephantopus tomentosus
Devil's Grass	Chondrilla juncea
Devil's Iron-weed	Lactuca pulchella
Devil's Plague	Daucus Carota
Devil's-weed	Lactuca Canadensis
Dog Burr	Cynoglossum officinale
Eve's Thread	Hemerocallis fulva
Fall Aster	Aster Lowrieanus
Farewell Summer	Aster lateriflorus hirsuticaulis
Feather Grass	Holcus lanatus
Federal-weed	Xanthium spinosum
Fire Cherry	Prunus Pennsylvanica
Gipsy-weed	Veronica officinalis
Glade Lily	Lilium Philadelphicum

*The significations of most of these names are given in the "Preliminary Flora," or in "Weeds of West Virginia."